Educational Supplement

Contributed by

The Office of Education

of the

American Osteopathic Association

Volume 7 January, 1955

Number 1 Pages 1 to 26

Journal A.O.A.
Vol. 54, No. 5

EDUCATIONAL SUPPLEMENT

The Office of Education of the American Osteopathic Association

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Editorial Office, 212 E. Ohio St., Chicago 11.
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Volume 7 | January, 1955 | Number 1

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Osteopathic Education

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OSTEOPATHIC COLLEGE ENROLLMENT 1954-55

In the fall of 1954, the total undergraduate enrollment in the six approved osteopathic colleges was 1,867, which is thirty less than actual student capacity. Four hundred and eighty-seven freshmen matriculated in the six osteopathic colleges in 1954, a decline of nine students from the entering class in 1953. Actually 539 applicants were accepted by the six colleges and paid deposits on their tuition. Of the fifty-two applicants who did not matriculate the majority stated financial difficulties as their reason. Most of them asked the various admissions committees to postpone their entrance into osteopathic colleges until the fall of 1955.

Another reason for the slight decline in total osteopathic college undergraduate enrollment was the unusual mortality rate of the freshman class which entered in 1953. This class dropped 11 per cent by the end of the freshman year. More than half the students dropped out because they were unable to continue financially. Financial difficulties faced by students in colleges of the healing arts will be discussed later in this Supplement.

TABLE I—ENROLLMENT 1954-55

	Freshmen	Sophomores	Juniors	Seniors	Total
CCO	61	59	57	46	223
COPS	93	86	80	77	336
DMS	58	49	60	60	227
KC	79	88	103	96	366
KCOS	96	65	77	93	331
PCO	100	99	97	88	384
	487	446	474	460	1,867

The abbreviations used for the osteopathic colleges in all the tables in this Supplement are as follows:
CCO—Chicago College of Osteopathy
COPS—College of Osteopathic Physicians and Surgeons
DMS—Des Moines Still College of Osteopathy and Surgery
KC—Kansas City College of Osteopathy and Surgery
KCOS—Kirksville College of Osteopathy and Surgery
PCO—Philadelphia College of Osteopathy

GRADUATING CLASSES

In the spring of 1954 the graduating classes, totaling 449, were slightly smaller than the 1953 graduating classes of 460, the largest number of graduates from osteopathic colleges in the last 25 years of osteopathic education. It will be noted, however, in Table III that the graduating class of 1955 will approximate the large class of 1953.

TABLE II—GRADUATING CLASSES, 1954

College	Number of Graduates
CCO	59
COPS	84
DMS	56
KC	73
KCOS	84
PCO	93
	449

TABLE III—ESTIMATE OF GRADUATES, 1955

College	Estimated Number of Graduates
CCO	46
COPS	77
DMS	60
KC	96
KCOS	93
PCO	88
Total	460

ENROLLMENT SINCE 1945

Table IV lists the enrollment in the six osteopathic colleges since 1945. Enrollment during 1945 was the smallest since 1900. This was due to the influence of the latter period of World War II, during which no deferment was granted by Selective Service to preosteopathic, premedical, and predental students. From the spring of 1944 to the end of the War, the only students entering osteopathic colleges were a small number of veterans, women, and men who were classified as IV-F by Selective Service.

TABLE IV—ENROLLMENT SINCE 1945

	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
CCO	35	77	154	188	215	242	237	240	221	223
COPS	147	194	240	279	336	356	359	348	344	336
DMS	41	104	171	235	264	292	278	254	246	227
KC	82	101	177	223	248	222	318	342	365	366
KCOS	91	141	250	315	386	410	374	368	343	331
PCO	160	204	225	283	329	354	362	365	378	384
Total	556	821	1217	1523	1778	1876	1928	1917	1897	1867

WOMEN STUDENTS IN OSTEOPATHIC COLLEGES

There has been a steady decline in the number of women applicants to osteopathic colleges since the end of World War II. During the school year 1953-54, there were forty-six women students in the entire undergraduate student bodies of the osteopathic colleges. This number represents only 2.5 per cent of the total enrollment. In the six freshman classes which matriculated in the fall of 1954, this small percentage continued. Fourteen women, 3 per cent of the entire freshman class, were admitted. Table V shows the distribution of women students in the various osteopathic colleges.

TABLE V—NUMBER OF WOMEN IN OSTEOPATHIC COLLEGES, 1954-55

College	Freshmen	Sophomores	Juniors	Seniors	Total
CCO	1	2	1	2	6
COPS	4	4	3	1	12
DMS	1	1	1	2	5
KC	3	1	4	2	10
KCOS	2	1	2	0	5
PCO	3	3	1	1	8
Total	14	12	12	8	46

The study and training required for men and women in the osteopathic college are the same. Professional careers in osteopathic medicine result in the same remuneration for women as for men. In the osteopathic profession women occupy high offices in professional organizations and serve on faculties of osteopathic colleges and on hospital and clinic staffs.

PREPROFESSIONAL TRAINING OF OSTEOPATHIC FRESHMEN

It will be noted in Table VI (pages 308 and 309) that osteopathic freshmen in 1954 received their preprofessional training in colleges and universities in thirty-nine states, Puerto Rico, and Canada, and that these 487 freshmen represent 201 liberal arts colleges and universities.

TABLE VI—WHERE OSTEOPATHIC FRESHMEN RECEIVED PREPROFESSIONAL TRAINING, FALL 1954

STATE AND COLLEGES	CCO	COPS	DMS	KC	KCOS	PCO	TOTAL
ALABAMA							
Talladega College	1						1
University of Alabama						2	2
Total	1					2	3
ARIZONA							
Arizona State College, Tempe		1					1
University of Arizona		1					1
Total		2					2
ARKANSAS							
Arkansas State College					1		1
Total					1		1
CALIFORNIA							
Bakersfield Junior College				1			1
College of the Sequoias		2					2
El Camino College		1					1
Fresno State College		2		1			3
George Pepperdine College		4					4
La Sierra College		3		3			6
Long Beach City College		1					1
Los Angeles City College		1					1
Los Angeles State College		6					6
Loyola University of Los Angeles		4					4
Occidental College		3					3
Pacific Union College		1		10			11
Pomona College						1	1
Sacramento State College		2					2
St. Mary's College of California		1					1
San Diego State College		2					2
San Jose State College		1					1
Santa Ana College		1					1
Stanford University		1					1
University of California, Berkeley		5					5
University of California, Los Angeles		17					17
University of Redlands		1					1
University of Southern California		17		1			18
Whittier College		1					1
Total		77		16		1	94
COLORADO							
University of Colorado	2						2
University of Denver					1		1
Total	2				1		3
CONNECTICUT							0
DELAWARE							0
DISTRICT OF COLUMBIA							
George Washington University					1		1
Georgetown University						1	1
Washington Missionary College				1			1
Total				1	1	1	3
FLORIDA							
Florida Southern College						1	1
Florida State University				1			1
Rollins College				1			1
University of Florida	1						1
University of Miami				1	2		3
Total	1			3	2	1	7
GEORGIA							
Emory University					1		1
Georgia Military College						1	1
University of Georgia		1					1
Total		1			1	1	3
HAWAII							0
IDAHO							
Idaho State College		1					1
Total		1					1
ILLINOIS							
Augustana College					1		1
Eureka College					1		1
Illinois Wesleyan College	1				1		2
Monmouth College					1		1
Northern Illinois State Teachers College	1						1
Roosevelt College	4		1				5
Southern Illinois University					2		2
University of Chicago		1					1
University of Illinois	1						1
Western Illinois State College				1			1
Total	7	1	1	1	6		16

STATE AND COLLEGES	CCO	COPS	DMS	KC	KCOS	PCO	TOTAL
INDIANA							
Ball State Teachers College					1		1
Butler University	1						1
Franklin College		1					1
Goshen College	1				1		2
Indiana University	1				1		2
Purdue University	1				2		3
Total	4	1			5		10
IOWA							
Cornell College			1				1
Drake University			2				2
Iowa State Teachers College			1				1
Iowa Wesleyan College	1						1
Morningside College		1					1
State University of Iowa			1				1
Total	1	1	5				7
KANSAS							
University of Kansas			1				1
Total			1				1
KENTUCKY							
Kentucky State College	1						1
Kentucky Wesleyan College		1					1
University of Kentucky				1			1
Total	1	1		1			3
LOUISIANA							
Tulane University	1	1					2
Total	1	1					2
MAINE							
Bates College						1	1
Total						1	1
MARYLAND							
Morgan State College						1	1
University of Maryland						1	1
Western Maryland College				1			1
Total				1		2	3
MASSACHUSETTS							
Assumption College			1				1
Springfield College						1	1
Tufts College				1		1	2
Total			1	1		2	4
MICHIGAN							
Albion College				1			1
Alma College					1		1
Central Michigan College of Education	2						2
Detroit Institute of Technology	2		4				6
Michigan State College	2		4		1		7
Michigan State Normal College			1				1
University of Detroit	2		4	1	4		11
University of Michigan	1	1	2		3		7
Wayne University	5		9	2	1		17
Western Michigan College of Education			1				1
Total	14	1	25	4	10		54
MINNESOTA							
University of Minnesota					1		1
Total					1		1
MISSISSIPPI							0
MISSOURI							
Central College				1	1		2
Central Missouri State College					1		1
Northeast Missouri State Teachers College	2		1		14		17
Park College				1			1
Rockhurst College				5			5
University of Kansas City				6			6
University of Missouri				1	1		2
Total	2		1	14	17		34
MONTANA							
Montana State College				1			1
Total				1			1
NEBRASKA							
Creighton University			1				1
Union College				1			1
University of Nebraska		1		2			3
Total		1	1	3			5

TABLE VI—WHERE OSTEOPATHIC FRESHMEN RECEIVED PREPROFESSIONAL TRAINING, FALL 1954
(continued)

STATE AND COLLEGES	CCO	COPS	DMS	KC	KCOS	PCO	TOTAL
NEVADA							0
NEW HAMPSHIRE							0
NEW JERSEY							
Rutgers University	1			2	1	2	6
St. Peter's College					1		1
Seton Hall University				2			2
Upsala College					1		1
Total	1			4	3	2	10
NEW MEXICO							
New Mexico College of Agriculture and Mechanic Arts					1		1
University of New Mexico				1			1
Total				1	1		2
NEW YORK							
Brooklyn College			1	1	3	2	7
Fordham University	1				1		2
Hartwick College					1		1
Hofstra College				1			1
Ithaca College						2	2
Long Island University	4		1	1	2	3	11
Manhattan College			1				1
New York University	2		1		2		5
Queens College						2	2
St. John's University	1			1			2
Syracuse University	2				1	2	5
University of Buffalo				1	2		3
Total	10		4	5	12	11	42
NORTH CAROLINA							
Duke University	1						1
University of North Carolina						1	1
Total	1					1	2
NORTH DAKOTA							
University of North Dakota					2		2
Total					2		2
OHIO							
Baldwin-Wallace College					1		1
Bowling Green State University			1		1		2
Denison University					2		2
Hiram College						1	1
John Carroll University	1			1	1	1	4
Kent State University	1		2				3
Marietta College	1						1
Muskingum College					1		1
Ohio State University			1	1			2
Ohio University					1		1
Ohio Wesleyan University					1		1
Otterbein College		1					1
University of Akron						1	1
University of Dayton	1						1
University of Toledo	2		1				3
Western Reserve University				2			2
Youngstown College			1		1		2
Total	6	1	6	4	9	3	29
OKLAHOMA							
Oklahoma Agricultural and Mechanical College				1			1
Phillips University				2			2
University of Tulsa					1		1
Total				3	1		4
OREGON							
Linfield College					1		1
University of Oregon					1		1
Total					2		2
PENNSYLVANIA							
Albright College	1						1
Alliance College					1		1
Chestnut Hill College						1	1
Dickinson College						1	1
Franklin and Marshall College						1	1
Gannon College				3			3
Gettysburg College					1	2	3
Juniata College					1		1
King's College						1	1
Lafayette College						1	1
La Salle College	1					7	8
Lebanon Valley College						1	1
Lincoln University						1	1
Muhlenberg College						1	1
PENNSYLVANIA *(Continued)*							
Pennsylvania State University	1	1	1		1	5	9
Philadelphia College of Pharmacy and Science						6	6
St. Francis College						1	1
St. Joseph's College						2	2
Temple University	2		1	2	1	21	27
University of Pennsylvania		1				7	8
University of Pittsburgh			2	1	1	2	6
University of Scranton				1		2	3
Ursinus College			1			2	3
Villanova College				1		3	3
Washington and Jefferson College			2				2
Westminster College					1		1
York Junior College						1	1
Total	5	2	7	8	7	68	97
RHODE ISLAND							
Rhode Island College of Pharmacy and Allied Science			1			1	2
University of Rhode Island						1	1
Total			1			2	3
SOUTH CAROLINA							0
SOUTH DAKOTA							
Huron College						1	1
University of South Dakota					1		1
Total					1	1	2
TENNESSEE							
Lambuth College				1			1
Milligan College					1		1
Southern Missionary College				1			1
University of Chattanooga	1				1		2
Vanderbilt University					1		1
Total	1			2	3		6
TEXAS							
Abilene Christian College				1			1
Agricultural and Mechanical College of Texas					1		1
Baylor University				2			2
Lamar State College of Technology					1		1
Midwestern University				1			1
North Texas State Teachers College				1			1
St. Mary's University of San Antonio					1		1
University of Houston				1			1
University of Texas					1		1
Total				5	4		10
UTAH							0
VERMONT							0
VIRGINIA							0
WASHINGTON							
Central Washington College of Education				1			1
Gonzaga University			1				1
Seattle University			1				1
University of Washington	1						1
Total	1	2	1				4
WEST VIRGINIA							
Concord College					1		1
Marshall College				1			1
Shepherd State College						1	1
West Virginia University					1		1
Total				1	2	1	4
WISCONSIN							
Beloit College					2		2
Marquette University			1				1
Northland College	1						1
University of Wisconsin	1		1		1		3
Total	2		2		3		7
WYOMING							0
CANADA							
University of Western Ontario					1		1
Total					1		1
PUERTO RICO							
University of Puerto Rico				1			1
Total				1			1
GRAND TOTALS	61	93	58	79	96	100	487

STATES LEADING IN NUMBER OF FRESHMEN

Table VII lists those states which lead in the number of freshmen who entered osteopathic colleges in 1954.

These states, besides having a population of 54 per cent of the entire osteopathic profession, contain a large number of osteopathic institutions, such as hospitals and clinics, as well as four of the six osteopathic colleges. Many state osteopathic organizations have established student selection committees made up of representatives of the profession, who cooperate with the various osteopathic college admissions committees and the Office of Education of the American Osteopathic Association. Members of these committees assist the premedical committees of their local colleges and universities in the counseling, guidance, and selection of students who express an interest in osteopathic medicine.

TABLE VII—STATES LEADING IN NUMBER OF FRESHMEN, 1954

State	Number of Colleges	Number of Freshmen
Pennsylvania	27	97
California	24	94
Michigan	10	54
New York	12	42
Missouri	7	34
Ohio	17	29

Table VIII shows the states leading in the number of freshmen who entered osteopathic colleges in the fall of 1953.

TABLE VIII—STATES LEADING IN NUMBER OF FRESHMEN, 1953

State	Number of Colleges	Number of Freshmen
California	21	88
Pennsylvania	22	88
Michigan	14	58
New York	21	48
Ohio	17	47
Missouri	7	24

Table IX shows the number of preprofessional colleges and states represented in the freshman classes.

TABLE IX—REPRESENTATION OF PREPROFESSIONAL COLLEGES AND STATES IN FRESHMAN CLASSES, 1954

	Freshman Enrollment	Number of Colleges Represented	Number of States Represented
CCO	61	41	18
COPS	93	38	14
DMS	58	36	15
KC	79	49	20
KCOS	96	67	24
PCO	100	45	16

The preprofessional training of 350 freshmen, or 72 per cent, of the total freshman classes, was furnished by colleges in the following states: Pennsylvania, California, Michigan, New York, Missouri, and Ohio. These states have a population of 6,598 osteopathic physicians, or 54 per cent of the entire osteopathic profession.

GEOGRAPHICAL DISTRIBUTION OF FRESHMEN

For comparative purposes, Table X shows the geographical distribution of the 1954 freshmen according to their residence and the osteopathic college which they are attending.

TABLE X—GEOGRAPHICAL DISTRIBUTION OF 1954 FRESHMEN ACCORDING TO RESIDENCE

State or Country	CCO	COPS	DMS	KC	KCOS	PCO	Total Freshmen	Total D.O.'s
Alabama	1						1	5
Alaska							0	1
Arizona			1	1			2	104
Arkansas							0	27
California		87		11	1		99	2,027
Colorado	1				1		2	197
Connecticut					1		1	73
Delaware			1				1	19
Dist. of Columbia					1	1	2	19
Florida	2			3	2		7	299
Georgia					1		2	68
Hawaii	1				1		2	11
Idaho							0	50
Illinois	9		1	1	6		17	401
Indiana	2				3		5	151
Iowa			5		2		7	474
Kansas	1				1		2	224
Kentucky	1			2			3	42
Louisiana							0	16
Maine						1	1	211
Maryland				1		1	2	25
Massachusetts				2	2	1	5	281
Michigan	16		27	4	11		58	1,131
Minnesota					2		2	90
Mississippi				1			1	7
Missouri				13	10		23	1,153
Montana				1			1	50
Nebraska			1	1			2	68
Nevada							0	26
New Hampshire							0	24
New Jersey	3		1	6	5	14	29	372
New Mexico				1			1	105
New York	10	1	3	5	14	13	46	482
North Carolina							0	39
North Dakota				1	1		2	16
Ohio	3		7	2	10	2	24	676
Oklahoma				3	1		4	347
Oregon				1	2		3	128
Pennsylvania	5	1	4	8	7	62	87	1,129
Rhode Island			1			2	3	77
South Carolina							0	14
South Dakota					1		1	51
Tennessee	2				1		3	70
Texas			1	6	4		11	569
Utah							0	28
Vermont							0	36
Virginia						1	1	35
Washington	1	1	2				4	159
West Virginia				1	2	1	4	123
Wisconsin	2		2		1		5	163
Wyoming							0	18
Canada	1			1	2		4	120
China				1			1	0
El Salvador				1			1	0
Iran		3					3	0
Malaya				1			1	0
Puerto Rico			1				1	0
Other Foreign Countries							0	83
Totals	61	93	58	79	96	100	487	12,114

PREPROFESSIONAL COLLEGES TRAINING LARGEST NUMBER OF FRESHMEN

Table XI lists the preprofessional colleges which trained the largest number of freshmen entering osteopathic colleges in 1954. For comparative purposes, Table XII shows a similar list of colleges which trained the largest number of freshmen entering osteopathic colleges in 1953.

TABLE XI—PREPROFESSIONAL COLLEGES TRAINING LARGEST NUMBER OF FRESHMEN, 1954

College	State	Number of Freshmen
Temple University	Pennsylvania	27
University of Southern California	California	18
University of California, Los Angeles	California	17
Wayne University	Michigan	17
Northeast Missouri State Teachers College	Missouri	17
Pacific Union College	California	11
University of Detroit	Michigan	11
Long Island University	New York	11

TABLE XII—PREPROFESSIONAL COLLEGES TRAINING LARGEST NUMBER OF FRESHMEN, 1953

College	State	Number of Freshmen
Wayne University	Michigan	27
University of California, Los Angeles	California	26
Temple University	Pennsylvania	22
University of Southern California	California	13
La Salle College	Pennsylvania	11
Northeast Missouri State Teachers College	Missouri	10
University of Pennsylvania	Pennsylvania	9

The fall of 1954 marks the first time in the last 4 years that Wayne University, Detroit, dropped from first place among colleges where osteopathic college freshmen received their preprofessional training. Temple University, which in 1954 moved from third place to first place, has steadily been among the first three preprofessional colleges preparing students for entrance into osteopathic college work. An excellent liaison exists between faculty members of Temple University and members of the administrative staff of the Philadelphia College of Osteopathy.

The University of Southern California and the University of California at Los Angeles also are in close touch with the College of Osteopathic Physicians and Surgeons in Los Angeles.

The Northeast Missouri State Teachers College in Kirksville, Missouri, inaugurated a preosteopathic course several years ago, which makes it possible for students after completing 3 years of such a course to receive their baccalaureate degrees following completion of their osteopathic college work. The position occupied by the Northeast Missouri State Teachers College in the list of colleges preparing the greatest number of students for osteopathic college work is undoubtedly due to its preosteopathic course.

LENGTH OF PREPROFESSIONAL TRAINING

Tables XIII and XIV show the length of preprofessional training which the matriculants in osteopathic colleges had completed upon entrance in 1954 and 1953.

The entering class of 1954 represents the last class which will be admitted with less than 3 years of preprofessional training. Only one of the osteopathic colleges admitted students in 1954 with less than 3 years of college work, and all will require a minimum of 3 years of preprofessional training for the class entering in 1955.

TABLE XIII—LENGTH OF PREPROFESSIONAL TRAINING OF OSTEOPATHIC MATRICULANTS, FALL OF 1954

	2 yrs.	2+ yrs.	3 yrs.	3+ yrs.	Degree	Advanced Degree	Total
CCO	0	0	6	15	38	2	61
COPS	0	0	11	22	54	6	93
DMS	0	0	9	5	43	1	58
KC	0	0	4	13	57	5	79
KCOS	0	0	12	20	61	3	96
PCO	3	8	2	7	78	2	100
	3	8	44	82	331	19	487
					72%		
			98%				

TABLE XIV—LENGTH OF PREPROFESSIONAL TRAINING OF OSTEOPATHIC MATRICULANTS, FALL OF 1953

	2 yrs.	2+ yrs.	3 yrs.	3+ yrs.	Degree	Advanced Degree	Total
CCO	0	0	5	8	48	1	62
COPS	0	0	9	18	61	5	93
DMS	0	0	9	10	43	1	63
KC	0	1	10	21	55	5	92
KCOS	2	4	11	13	51	5	86
PCO	2	5	3	7	77	6	100
	4	10	47	77	335	23	496
					72%		
			97%				

The Bureau of Professional Education and Colleges of the American Osteopathic Association recommends that preosteopathic students complete at least 3 years of college work and urges them to emphasize general education. Osteopathic colleges have as their first objective the training of the general family physician who will be a professional man and not merely a technician. A good cultural background in the preprofessional colleges is considered important in a doctor's training.

COMBINED DEGREES

Many students entering osteopathic colleges are interested in securing a B.A. or B.S. degree either before matriculating in the professional school or after completing the first year in the osteopathic college. A number of colleges of arts and sciences have agreed to confer the baccalaureate degree upon their students who do satisfactory work for 3 years and then successfully complete their first year in an approved osteopathic college.

In recent years the combined degree has been granted to students who have completed their first year's work in an osteopathic college by the following colleges and universities:

George Pepperdine College, Los Angeles, California

Roosevelt College, Chicago, Illinois

Iowa Wesleyan College, Mount Pleasant, Iowa

St. Ambrose College, Davenport, Iowa

Albion College, Albion, Michigan
Alma College, Alma, Michigan
Central Michigan College of Education, Mount Pleasant, Michigan
Hillsdale College, Hillsdale, Michigan
Michigan State College, East Lansing, Michigan
Western Michigan College of Education, Kalamazoo, Michigan
St. John's University, Collegeville, Minnesota
Northeast Missouri State Teachers College, Kirksville, Missouri
University of Omaha, Omaha, Nebraska
Brooklyn College, Brooklyn, New York
Colgate University, Hamilton, New York
St. Lawrence University, Canton, New York
Syracuse University, Syracuse, New York
University of Buffalo, Buffalo, New York
Denison University, Granville, Ohio
Kent State University, Kent, Ohio
University of Toledo, Toledo, Ohio
Phillips University, Enid, Oklahoma
Thiel College, Greenville, Pennsylvania
West Texas State Teachers College, Canyon, Texas
Utah State Agricultural College, Logan, Utah
Concord College, Athens, West Virginia
West Virginia Wesleyan College, Buckhannon, West Virginia

NATIONAL OSTEOPATHIC COLLEGE SCHOLARSHIPS

The Auxiliary to the American Osteopathic Association inaugurated a scholarship program in the fall of 1949. Five osteopathic scholarships of $1,000 each are being awarded each year. Information about the scholarships is mailed to the deans of approved colleges of arts and sciences throughout the United States and Canada each fall. The scholarships are applied to the college tuition at the rate of $500 per year for the first 2 years in the osteopathic colleges in which the applicants matriculate. Applications for the scholarships for the entering classes in 1955 will close May 1, 1955.

In 1954 the five scholarship winners were as follows:

Name	Preprofessional College Attended	Osteopathic College Entered
Wayne R. English, Jr.	Franklin and Marshall College Lancaster, Pennsylvania	Philadelphia College of Osteopathy
Robert M. Fogel	Temple University Philadelphia, Pennsylvania	Philadelphia College of Osteopathy
Frederick L. Kavanaugh	Springfield College Springfield, Massachusetts	Philadelphia College of Osteopathy
Ralph C. Merwin	Lamar State College of Technology, Pt. Arthur, Texas	Kirksville College of Osteopathy and Srugery
F. Sims Pounds, Jr.	Pennsylvania State University, State College, Pennsylvania	Des Moines Still College of Osteopathy and Surgery

A scholarship applicant must have received at least a tentative acceptance from an osteopathic college in order to be eligible to make application for scholarship aid. Information about the scholarship program can be secured at the Office of Education, American Osteopathic Association, 212 East Ohio Street, Chicago 11, Illinois.

Scholarship awards will be made on the basis of quantity and quality of preprofessional work, the score on the interest inventory, personality factors, financial need, and motivation toward the osteopathic school of medicine.

ADDITIONAL SCHOLARSHIP AID

The Auxiliary to the California Osteopathic Association for several years has been awarding one scholarship a year to an applicant to the College of Osteopathic Physicians and Surgeons in Los Angeles. Information regarding this scholarship aid may be obtained by writing to Mrs. Thomas J. Meyers, secretary, 525 Covington Place, Pasadena 2, California.

The Maine Osteopathic Association initiated a scholarship program in 1953 which provides $500 towards tuition during the freshman year for a student who has received his preprofessional training in an approved college or university in the State of Maine and who has been accepted for admission to any of the osteopathic colleges. Information regarding this scholarship may be obtained by writing to Dr. John M. Thurlow, Professional Building, Main Street, Waterville, Maine.

The Canadian Osteopathic Association awards two scholarships a year to young men and women of Canada who are planning to study osteopathy and practice in any province of Canada. Information about these scholarships may be obtained by writing to Miss Joyce S. Currie, secretary, Canadian Osteopathic Association, 609 Medical Arts Building, Montreal 25, Quebec, Canada.

The staff of the Garden City Hospital, Garden City, Michigan, initiated a scholarship program in 1954, which will provide annually at least $360 to be applied toward tuition. The applicant must be a resident of the State of Michigan and must show evidence of financial need. Information about these scholarships may be obtained by writing to Dr. John T. Baker, treasurer, Garden City Hospital Scholarship Fund, 1810 North Telegraph Road, Dearborn, Michigan.

Various loan funds are maintained and administered by the osteopathic colleges for students in their junior and senior years. The American Osteopathic Association for many years has administered a large loan fund, which is available to osteopathic students in their junior and senior years upon recommendation of their respective college deans.

The Osteopathic Foundation also maintains a student loan fund for juniors and seniors in osteopathic colleges who are recommended by their faculty committees. Inquiries may be sent to the chairman of the Osteopathic Foundation Student Loan Fund Committee, 212 East Ohio Street, Chicago 11, Illinois.

EDUCATIONAL STANDARDS FOR OSTEOPATHIC COLLEGES*

1954

Approved by the Board of Trustees of the American Osteopathic Association

ADMISSION REQUIREMENTS

1. A minimum of three years of college training in a college or university accredited by a regional educational association is desirable for admission to professional education in an osteopathic college.† An applicant for admission must have completed at least one-half of the required credit for a baccalaureate degree in an accredited college to be considered for admission to an osteopathic college. In exceptional cases, a duly recognized and approved osteopathic college may request that the academic credentials of a highly qualified student, who has completed his preprofessional work in a college or university not accredited by a regional educational association, be evaluated by the Bureau of Professional Education and Colleges of the American Osteopathic Association. Approval of such credentials by the Bureau must be obtained before admission of any such exceptional student to an osteopathic college. Each such case shall be considered upon an individual basis.

All transcripts of records from other schools shall be obtained directly from such schools. Transcripts presented directly by the applicant will not be acceptable.

The official transcript of each applicant must show the satisfactory completion of the following minimum credits in basic subjects prior to admission:

English	6 semester hours (12 hours recommended)
Physics	‡6 to 8 semester hours
Biology	‡6 to 8 semester hours (12 hours recommended
Inorganic Chemistry	8 semester hours
Organic Chemistry	4 to 8 semester hours, including both the aliphatic and benzene compounds

It is desirable that the elective subjects afford a broad educational and cultural background.

2. The American Council on Education has evaluated the content and quality of the various educational programs conducted by the Armed Forces and has issued a "Guide to the Evaluation of Educational Experiences in the Armed Forces" to assist educational institutions, desiring to do so, to award proper college credits for specific courses taken in these programs.

The following statement is accepted by the American Osteopathic Association as a basis for the evaluation of equivalency of college credits:

College credits (except in science courses requiring laboratory work or except blanket credits for military services not based on courses or examinations) may be based either on (a) courses taken from the Armed Forces Institute or in service courses of the Armed Forces according to the "Guide to the Evaluation of Educational Experiences in the Armed Forces" of the American Council on Education, or (b) performance in the General Educational Development Tests of the American Council on Education.

3. In addition to the academic requirements listed in paragraphs 1 and 2, applicants to osteopathic colleges shall be selected on the basis of academic performance, osteopathic motivation and personal qualifications.

4. With the consent of the Bureau of Professional Education and Colleges, upon due individual consideration, not more than two years of time credit may be accorded to students presenting credentials from other than osteopathic professional schools. Neither time credit nor subject credit shall be accorded, unless such credit can unmistakably be interpreted as the equivalent of courses in the same subjects over the same period of time in the osteopathic college which grants the credit.

5. Credit for work done in other approved medical schools may be accorded only after most careful individual evaluation.

EDUCATIONAL STANDARDS
(Minimum Requirements)

1. *Organization.*—

An osteopathic college shall be incorporated as a non-profit institution.

The Board of Trustees shall be composed of persons, including a strong representation of laymen, interested in the advancement of the osteopathic school of practice. No member or officer of the Board shall receive financial remuneration from the operation of the college or its associated teaching hospitals. The members of the Board should serve sufficiently long terms so that continuity of the institution's program will be carried out without precipitate change in policy. Since the Board of Trustees is the responsible corporate body and is required to establish policy in the direction and guidance of the administration and the educational activities of the institution, it follows that a member of the administrative staff or faculty should not be a member or officer of the Board of Trustees.

The institution must be organized to conform to accepted standards of professional education as to business management, faculty and professional staff.

Since the proper teaching of osteopathic medicine cannot be accomplished with the revenue derived through income from students, an acceptable college must show adequate additional income.

The primary objective of the college shall be to provide an educational program which will prepare osteopathic physicians and surgeons for general practice in osteopathic medicine. Such an educational program will afford the proper foundation for any course of continuing training as may prove desirable.

Administration and faculty shall consist of persons who are (a) devoted to the primary objective of the college, (b) possessed of such qualifications and purposes as will assure the perpetuation of the osteopathic school of medicine, and (c) inspired toward the further development of distinctive osteopathic contribution to the broad field of medicine.

The evaluating agency for osteopathic teaching institutions is the American Osteopathic Association,

*Revised and issued by the Bureau of Professional Education and Colleges of the American Osteopathic Association.

†Undergraduate college programs are accredited by the following five regional educational associations:

Middle States Association of Colleges and Secondary Schools
North Central Association of Colleges and Secondary Schools
Northwest Association of Secondary and Higher Schools
Southern Association of Colleges and Secondary Schools
Western College Association

The New England Association of Colleges and Secondary Schools is not an accrediting agency, but has standards for membership similar to those maintained by the above five accrediting agencies. Membership in the New England Association of Colleges and Secondary Schools is recognized by the American Osteopathic Association as approval of the colleges in that area.

All approved undergraduate colleges require high school graduation or its equivalent for admission.

‡Whichever is a complete year's course in the college involved.

acting through its Board of Trustees on recommendation of the Bureau of Professional Education and Colleges.

The college shall afford to proper representatives of the American Osteopathic Association unhampered opportunities to study and inspect the facilities, students, faculty and administration, including a study of all records, credentials, grading, promotion and graduation procedures.

The colleges shall fill out, annually, student personnel information blanks for the Association's records and supply lists of students by classes in order that accurate information may be recorded in the files of the Association. The college shall complete annual college survey blanks as requested by the Bureau of Professional Education and Colleges of the American Osteopathic Association.

The college shall seek membership in the American Association of Osteopathic Colleges and enter into agreement with the members of that Association and the Bureau of Professional Education and Colleges of the American Osteopathic Association as to credits to be granted and regulations to be followed in the transference of students from one osteopathic college to another.

2. *Administration.*—

The college shall be under the direction and supervision of a president, dean or other executive officer, selected because of his particular training and experience and capable of interpreting the prevailing standards for osteopathic education. This individual shall have authority to carry these standards into effect. Appointment and promotion of the administrative staff shall be made by the Board of Trustees, on the recommendation of the executive officer. Appointment and promotion of the faculty shall be made by the Board of Trustees on the recommendation of the chief executive officer, who shall transmit to the Board of Trustees the recommendations of the dean developed through consultation with the department chairmen.

The number of students for which the institution can adequately provide an educational program shall be taken into consideration in determining the necessary faculty and clinical, laboratory and hospital facilities.

A system of faculty-student advisers shall be established, and opportunity for frequent personal contact between members of the faculty and of the student body shall be provided.

Each college shall publish a catalog not less frequently than every other year. Catalogs shall list the courses available, the faculty members and the time schedule. Catalogs shall set forth the entrance requirements, tuition fees, and such general information as is necessary to the members of the student body. The list of students enrolled each year shall be included.

A committee of the faculty for the evaluation of entrance credentials shall assist the executive officer in evaluating the qualifications of applicants.

Faculty meetings shall be held at stated intervals at which time reports of the various faculty committees shall be presented to the faculty.

Records of preliminary education and certification thereof shall be kept on file permanently for examination by proper officials. The system of records must show in detail throughout the college course, the attendance record, grade and any other notations useful in evaluating the total work of each student.

Students shall be required to be in actual attendance within the first week of each term for which they receive credit. Each student shall be required to be in actual attendance in the institution during the four years required for his undergraduate work unless time credit has been accorded for work actually pursued in attendance at another osteopathic college approved by the American Osteopathic Association or in other similarly approved colleges. Students shall complete at least the last year of their undergraduate course in residence in the college which confers the degree.

No credit shall be accorded in any course wherein the record indicates an attendance of less than 80 per cent.

Graduates must be at least 21 years of age at the time of graduation.

3. *Faculty.*—

A competent teaching faculty shall be selected and it shall be organized into departments. In addition to other qualifications, consideration should be given to thorough training, a successful teaching experience, clinical experience and demonstrated ability or desire to engage in research. In the selection of faculty members, the executive officer should consult with the department heads and transmit to the Board of Trustees recommendations developed through such conferences.

Faculty members should have a reasonable security and tenure.

The faculty roster should list at least ten full-time teachers of professional rank. In the laboratory courses there should be a minimum ratio of one assistant for each 25 students.

A qualified librarian should be employed to supervise and develop the library.

4. *Plant.*—

A college must have for its exclusive use adequate buildings, which provide lecture rooms, laboratories, library and administrative offices.

The medical library should include the modern texts, reference books, and the leading periodicals needed in the teaching program.

5. *Teaching Aids.*—

Each institution should have a museum of pathological and anatomical specimens and such auxiliary adjuncts, including visual aids, as are desirable for effective teaching.

A sufficient number of cadavers should be provided so that every two students may dissect at least a lateral half.

A supply of animals should be provided for use in the college laboratories. Adequate provision shall be made for their care and housing.

6. *Clinical Facilities.*—

Each college shall operate a general clinic. Histories and records in the clinic shall be maintained and utilized as teaching material. Clinics should be organized so that patients may be cared for in the clinic or in their homes.

Osteopathic colleges must have access, for teaching purposes, to a general hospital or hospitals affiliated with, or under control of, the college.

The college should appoint those who direct the clinical teaching, or supervise the staff concerned with teaching in such hospitals in order that proper supervision can be exercised over students in their contact with patients.

Students should have opportunity of observing and studying a wide variety of diseases ranging from the

common case problems to the complex and rare conditions. The material available should be used to its greatest teaching value. The student class should be so organized as to afford the closest possible approach to individual instruction.

Clinical clerkship should be provided. Students should observe, keep records and administer treatment under the supervision of the teaching staff.

An obstetrical clinic must be conducted so that each student shall be properly trained in the care and management of obstetrical cases. All areas of clinical participation shall be under the supervision of the responsible teaching class. A carefully prepared report and summary shall be compiled by the student for each case under his observation.

Students shall attend post-mortem examinations under the direction of the Department of Pathology. Each student shall prepare protocols on at least six post-mortem examinations.

Training Criteria for the Clinical Clerkship in the Hospital:

Clinical clerkship programs in hospitals which are not on the campus of an approved college, and not under the immediate authority of the college administration shall be approved only in hospitals having the approval of the American Osteopathic Association for either intern or residency training or both.

Facilities for clinical clerkship training under the immediate authority of the college which fall in categories other than outpatient clinics and approved hospitals shall be inspected and appraised for approval on an individual basis.

The program must provide educational experience in the various departments of the hospital.

There must be a definite program of instruction, including case recording and study, clinical observation, collateral reading, didactic work and a regular program of staff lectures, clinical conferences, etc.

There must be adequate daily supervision of the student, and his progress must be reported regularly to the college.

A properly qualified individual must be designated as in charge of the clerkships in the affiliated institution. This individual should be directly responsible to the dean of the college with which the hospital is affiliated.

The clinical faculty in the affiliated institution must be composed of qualified members properly organized as a teaching faculty.

The sufficiency and diversity of clinical material in the affiliated institutions should determine the number of students to be trained at any one time.

Such programs shall be evaluated by the Bureau of Professional Education and Colleges in the accreditation procedure for the colleges.

7. *Curriculum.*—

Since the osteopathic profession and its colleges maintain their independence and distinction in the general field of medicine because of the contribution which osteopathy makes to the prevention, the diagnosis and the treatment of disease, and because the importance of maintaining the structural integrity of the body should be recognized and emphasized in all departments of practice, approved osteopathic colleges are required to give adequate and comprehensive training in the principles and practice of osteopathic diagnosis and therapeutics. This requirement includes, first, the presentation of special courses of instruction in distinctively osteopathic subjects, particularly applied anatomy and physiology, osteopathic principles, structural pathology and osteopathic manipulative technics.

In addition to the special courses named hereafter, the course content of the basic science subjects—anatomy, physiology, chemistry, pathology, bacteriology and immunology—should include the presentation and discussion of structural pathologies, their presence, their effects, their influence on anatomical relationships, the physiological and chemical reactions of the body, the progression of pathological changes, and the natural resistance of the body to the invasion of microorganisms.

During the clinical years, the part played by structural pathologies in the etiology, pathology, diagnosis, prognosis and treatment of all classifications of diseases shall be presented and fully discussed. The incorporation of structural findings in case records and the application of osteopathic manipulative treatment, whenever indicated, shall be required in the management of every teaching case in the outpatient clinic and the teaching hospital.

The curriculum in a college of osteopathy should be presented in a minimum of four standard academic years of at least one thousand (1000) hours each and should include adequate and comprehensive instruction in:

Anatomy
Embryology
Histology
Physiology
Biochemistry
Pharmacology
Toxicology
Sanitation
Bacteriology
Parasitology
Immunology
Radiology
Surgery
Orthopedic Surgery
Urology
Otorhinolaryngology
Ophthalmology
Anesthesiology
Comparative Therapeutics
Materia Medica—associated subjects
Pathology
Public Health—Preventive Medicine
Hygiene
Obstetrics and Gynecology
Osteopathic Medicine
Osteopathic Principles, Practice and Technic
Internal Medicine
Neurology
Psychiatry
Pediatrics
Dermatology and Syphilology
Therapeutics
Tropical Medicine

8. *Degree.*—

Inasmuch as the degree of Doctor of Osteopathy is a time-honored designation, conferred by colleges of osteopathy to distinguish the graduates of the osteopathic school of practice; since it is a term legalized by charters of all osteopathic colleges and a legal term written into many laws governing the practice of osteopathic physicians and surgeons; since it is the term used in literature, reference books, governmental regulations (national, state, local, etc.) to designate graduates of this school; since it serves to distinguish such graduates from graduates of other schools of the practice of the healing arts; since it has become a well-confirmed precedent in designation of osteopathic physicians; since much labor has been expended to identify the degree with its exponents; therefore, the only degree to be issued by an approved osteopathic college qualifying candidates for examination for licensure to practice the healing arts shall be the degree, Doctor of Osteopathy.

It is not intended thereby to prevent approved osteopathic colleges from granting honorary degrees nor degrees in course of such nature as shall be warranted by courses undertaken in whole or in part in the approved college.

APPROVED OSTEOPATHIC COLLEGES

Chicago College of Osteopathy
5250 Ellis Avenue, Chicago 15, Illinois

Location: Northeastern part of Illinois on Lake Michigan, population 3,500,000, transportation center of United States.

Enrollment: Freshman capacity 70, total enrollment capacity 240.

Entrance requirements in addition to minimum requirements: Three years of preprofessional study or 90 semester hours, 6 to 8 semester hours of organic chemistry.

Length of course: 36 months, 5,467 instructional hours.

College expenses: Tuition $650 per year, includes all fees, books $125 per year, students required to purchase microscopes, cost $250 to $300.

Living costs: Minimum board $15 per week, minimum room costs $7 per week.

Living accommodations: One fraternity house with capacity of 34, private residences located conveniently to the college.

Affiliated teaching hospital facilities: Chicago Osteopathic Hospital, 100 beds, 15 bassinets; Detroit Osteopathic Hospital, Detroit, Michigan, 254 beds, 60 bassinets; Art Centre Hospital, Detroit, Michigan, 79 beds, 12 bassinets. Total 433 beds, 87 bassinets.

Administrative officers: R. N. MacBain, D.O., President of the College; Walter C. Eldrett, D.O., Dean of the College; Mrs. Blanche Maughan, A.B., Registrar.

College of Osteopathic Physicians and Surgeons
1721 Griffin Avenue, Los Angeles, California

Location: Southwestern California on the Pacific Coast, population, 1,500,000.

Enrollment: Freshman capacity 96, total enrollment capacity 384.

Entrance requirements in addition to minimum requirements: Quantitative analysis 3 semester hours, psychology 3 semester hours, foreign language 12 semester hours (6 semester hours allowed for two years of foreign language in high school), social science 3 semester hours, three years of preprofessional study or 90 semester hours.

Length of course: 40 months, 5,838 instructional hours.

College expenses: Tuition $700 per year, fees, first two years $40, last two years $35, books and equipment $115 freshman year, $165 sophomore and junior years, none the senior year, microscopes supplied by the college.

Living costs: Minimum board $15 per week, minimum room costs $7 per week.

Living accommodations: Private housing, out-of-state students may write to the Dean of the College for assistance. It is advisable to make necessary arrangements prior to start of college year.

Affiliated teaching hospital facilities: Los Angeles County Osteopathic Hospital of Los Angeles County General Hospital, 300 beds, 36 bassinets.

Administrative officers: W. Ballentine Henley, A.B., M.A., LL.B., M.S.P.A., LL.D., President of the College; Earle L. Garrison, A.B., D.O., Dean of the College; Benjamin W. Fullington, A.B., M.A., Registrar.

Des Moines Still College of Osteopathy and Surgery
720 Sixth Avenue, Des Moines, Iowa

Location: Central Iowa, the capital city, population 175,000.

Enrollment: Freshman capacity 70, total enrollment capacity 280.

Entrance requirements in addition to minimum requirements: Three years of preprofessional college or 90 semester hours.

Length of course: 40½ months, 7,017 instructional hours.

College expenses: Tuition $700 per year, including fees, books $100 to $150 per year, students required to purchase microscopes, cost $250 to $300.

Living costs: Minimum board $16 per week, minimum room costs $7.50 per week.

Living accommodations: One fraternity house with capacity of 55, ample boarding houses near college.

Affiliated teaching hospital facilities: Still Osteopathic Hospital, 97 beds, 20 bassinets; Des Moines General Hospital, 37 beds, 5 bassinets; Wilden Osteopathic Hospital, Des Moines, Iowa, 45 beds, 12 bassinets; Doctors Hospital, Columbus, Ohio, 150 beds, 20 bassinets; Flint Osteopathic Hospital, Flint, Michigan, 45 beds, 10 bassinets. Total 374 beds, 67 bassinets.

Administrative officers: Edwin F. Peters, A.B., B.S., M.A., Ph.D., President of the College; John B. Shumaker, B.A., M.S., Ph.D., Dean of the College; Wendell R. Fuller, B.S., Registrar.

Kansas City College of Osteopathy and Surgery
2105 Independence Avenue, Kansas City 1, Missouri

Location: Extreme western part of state on the border of Kansas, a center of transportation facilities, population 400,000.

Enrollment: Freshman capacity 100, total enrollment capacity 400.

Entrance requirements in addition to minimum requirements: Three years of preprofessional study.

Length of course: 38½ months, 5,648 instructional hours.

College expenses: Tuition $600 per year, fees $45 per year, books $100 per year, students required to purchase microscopes, cost $250 to $335.

Living costs: Minimum board $15 per week, minimum room costs $6 per week.

Living accommodations: Private boarding houses in the immediate vicinity of the college, "low cost" housing development close to the college provides accommodations for married students.

Affiliated teaching hospital facilities: Osteopathic Hospital Unit, 150 beds; Conley Maternity Hospital Unit, 30 beds, 30 bassinets. Total 180 beds, 30 bassinets.

Administrative officers: Joseph M. Peach, B.S., D.Sc., President of the College; Kenneth J. Davis, A.B., D.O., Dean of the College.

Kirksville College of Osteopathy and Surgery
Kirksville, Missouri

Location: North central part of the state, population 12,000.

Enrollment: Freshman capacity 100, total enrollment capacity 400.

Entrance requirements in addition to minimum requirements: Three years of college credit required; outstanding students, on individual evaluation, may be accepted with less than three years of credit, provided they have completed one-half of the credits required for a baccalaureate degree; organic chemistry 6 to 8 semester hours.

Length of course: 30 months, 5,830 instructional hours.

College expenses: Tuition $700 per year, fees $40 per year, books $100 per year, students required to purchase microscopes, cost $175 to $300.

Living costs: Minimum board $250 to $350 per year, minimum room costs $150 to $250 per year.

Living accommodations: 24 veterans' units, apartment house with seven apartments, dormitory for 26 men, four fraternity houses, private residences.

Affiliated teaching hospital facilities: Kirksville College of Osteopathy and Surgery Hospital, 108 beds, 20 bassinets; Laughlin Hospital, 92 beds, 7 bas-

sinets; Community Nursing Home, 113 beds; Still Convalescent Home, 17 beds; Still-Hildreth Osteopathic Sanatoria, 280 beds. Total 610 beds, 27 bassinets.

Administrative officers: Morris Thompson, A.B., L.H.D., D.Sc.Os., President of the College; M. D. Warner, A.B., D.O., Dean of the College; Marie A. Johnson, Registrar.

Philadelphia College of Osteopathy
48th and Spruce Streets, Philadelphia 39, Pennsylvania

Location: Southeastern part of Pennsylvania, population 2,000,000.

Enrollment: Freshman capacity 105, total enrollment capacity 400.

Entrance requirements in addition to minimum requirements: No change.

Length of course: 37½ months, 6,132 instructional hours.

College expenses: Tuition $750 per year, including fees, books $125 per year, students required to purchase microscopes, average cost $300.

Living costs: Minimum board $17 per week, minimum room costs $8 per week.

Living accommodations: 3 fraternity houses accommodating 45 men, private boarding houses.

Affiliated teaching hospital facilities: Osteopathic Hospital of Philadelphia, 130 beds, 29 bassinets; Osteopathic Hospital—North Center, 129 beds, 23 bassinets. Total 259 beds, 52 bassinets.

Administrative officers: William E. Brandt, D.O., President of the College; Sherwood Mercer, A.B., M.A., Dean of the College; Thomas M. Rowland, Jr., B.S., Registrar.

Symposium: Osteopathic Activity in the Fields of Medical Education, Health Service, and Research*

Introduction

ALEXANDER LEVITT, D.O.
Chairman, Department of Professional Affairs
Brooklyn

The subject, "Osteopathic Activity in the Fields of Medical Education, Health Service and Research," is presented in this report to the public and the profession by the Department of Professional Affairs of the American Osteopathic Association.

Because of its accepted place in human society, osteopathy has a responsibility to examine its position from time to time and to present a public account of its activities—especially those that have direct bearing on the public health. This report is in acknowledgment of such responsibility.

Osteopathic medicine supports public health in three major areas of service:

1. Education which prepares properly adapted trainees for skillful administration of preventive, curative, and alleviative measures; for maintenance and restoration of the physical and mental well-being of individuals seeking their professional services, and for leadership in community and other programs for the advancement of the public health.

2. Comprehensive health care for the individual and his family.

3. Research into basic causes of disease.

Participating in the presentation of this report are Dr. Robert B. Thomas and Mr. Lawrence W. Mills, chairman and assistant secretary, respectively, of the Bureau of Professional Education and Colleges; Drs. J. Paul Leonard and Robert A. Steen, chairman and secretary, respectively, of the Bureau of Hospitals; and Dr. Alden Q. Abbott and True B. Eveleth, chairman and secretary, respectively, of the Bureau of Research.

Accreditation of Osteopathic Education

ROBERT B. THOMAS, D.O.
Chairman, Bureau of Professional Education and Colleges
Huntington, W. Va.

In June, 1874, Andrew Taylor Still, M.D., made public certain postulates which contained the basis for the ultimate establishment of a school of medicine. He called this new school osteopathy and, I believe, realized that this new idea in healing would contribute a revolutionary concept to the practice of the healing arts—a concept which continues to grow and enlarge as we continue to investigate and discover new methods for the application of his basic theories in 1954.

Many of the events which brought this school of medicine to its present state of development are to be found in a review of the history of osteopathic education. Its vitality, its strength, and its soundness can be measured only by a look into the past and by tracing the events through the year to today, July 12, 1954.

It is my belief that osteopathic education began on the day Still's inquiring mind began by a process of refutation to develop the ideas which resulted in his public announcement in June, 1874. He had rejected many of the theories which formed the basis for the practice of medicine in the preceding years. As a result, he was faced with the necessity of developing new formulae which he could use in the practice of the healing arts.

Others might date the beginning of osteopathic education from 1874 when Still first stated publicly his basis for the practice of medicine. Others may prefer to use the date when the first class was matriculated at the American School of Osteopathy in July, 1892, subsequent to the granting of its charter by the State of Missouri in May, 1892. In any event, osteopathic education is more than 60 years old.

*A report to the public and the osteopathic profession made by the Department of Professional Affairs of the American Osteopathic Association at the General Sessions, Fifty-Eighth Annual Convention of the American Osteopathic Association, Toronto, Canada, July 12, 1954.

The 10 years following the opening of the American School of Osteopathy in Kirksville, Missouri, saw rapid establishment of facilities designed to train doctors of osteopathy. The American Osteopathic Association made successful efforts to insure to students and society that these institutions would meet certain standards before they were accredited as colleges of osteopathy. In 1897, the Constitution and Bylaws of the American Association for the Advancement of Osteopathy, the predecessor of the American Osteopathic Association, prescribed educational standards for an approved college of osteopathy. These standards, with the changes made as educational processes indicated the need, have been the basis for the recognition and approval of colleges of osteopathy since that date. The current revision of the "Educational Standards for Osteopathic Colleges" was approved in July, 1954. It represents the twenty-third major revision of this important document.

The Educational Standards reveal clearly the continuing efforts of the profession to improve its training program for men and women desiring to become doctors of osteopathy. They serve also to catalogue the impressive development of a new profession through the first half of the twentieth century and to record the increasing knowledge and understanding of the basic medical sciences and their relationship to clinical subjects.

Twelve colleges of osteopathy were recognized and approved by the American Osteopathic Association in 1901. As subsequent years brought with them increasing costs in operation, this number was gradually reduced to six. There were instances where failure to meet educational standards resulted in the closure. There are no substandard schools of osteopathy conducting regular programs of undergraduate training today.

A review of the historical events which brought osteopathic education to the present level of scholastic achievement reflects credit and honor upon all phases of professional endeavor. A review of the development of the Bureau of Professional Education and Colleges will demonstrate the loyalty and devotion of the profession, as well as its many friends in society who look to its members for specific contributions to health care.

The evaluating agency for osteopathic education is the Bureau of Professional Education and Colleges. This Bureau as presently constituted is the result of a long evolutionary process.

The founding of the American Association for the Advancement of Osteopathy in 1897 was accompanied by the appointment of various committees, including a Committee on Education. At its annual convention in 1901, the American Association for the Advancement of Osteopathy adopted its first formal Constitution and Bylaws which changed the name of the organization to the American Osteopathic Association. The Constitution established the first three committees of the association, one of which was the Committee on Education, which consisted of three members and was assigned duties as follows:

[1] The Committee on Education shall take cognizance of all the various Osteopathic educational institutions with references to the maintaining of a high standard of attainment in those who enter the profession.

[2] This Committee, together with the executive committee of the Associated Colleges of Osteopathy, shall constitute a joint committee which shall provide for the investigation of schools applying for membership in the Associated Colleges; and for an annual investigation of schools already members; and shall report thereon to this Association.

The Board of Trustees and the duly authorized representatives of the Associated Colleges shall consider this report and decide upon the reception or rejection of such schools; and, if they agree, the decision shall be final; but if they disagree, then they shall submit the question at issue to this Association for final settlement.

[3] The Committee on Education shall take cognizance of all Osteopathic publications, both professional and general, with particular reference to their ethical character; shall investigate the subject of the relations of members of the profession to each other and to the public, and shall make an annual report to the Association.

In 1905 the American Osteopathic Association established a Board of Regents, consisting of five members, for the purpose of supervising preliminary examination of matriculants in recognized osteopathic colleges. The records do not indicate to what extent this Board carried out this function; however, it may be assumed that this group recognized that the responsibility of student selection was primarily that of the individual college.

The next year the Board of Regents became active in the organization of the A. T. Still Graduate School of Osteopathy which later became the A. T. Still Research Institute. The Board was dissolved in 1914 when the new organizational structure of the American Osteopathic Association was adopted.

In the process of reorganization, the Committee on Education became the Department of Education and was to consist of not less than three nor more than seven members. The duties of the Department of Education were the same as those of the Committee.

In 1915, the Associated Colleges of Osteopathy recommended to the Board of Trustees of the American Osteopathic Association that a representative from each of the osteopathic colleges be a member of the Department of Education. The Board was in full accord with this recommendation, but was unable to make such appointments, since the Bylaws limited membership in the Department to seven members. The problem was solved by appointing three members to the Department and providing for an associate or advisory committee to consist of a representative from each college.

At the 1916 convention of the American Osteopathic Association, the Bylaws were amended increasing membership in the Department to seven or more members in order to permit full implementation of the recommendation of the Associated Colleges of Osteopathy. The 1917 DIRECTORY OF THE AMERICAN OSTEOPATHIC ASSOCIATION listed a Department membership composed of three members at large plus a representative from each of the recognized colleges. This was the only directory to list college representatives as part of the Department as the Bylaws were changed at the next meeting, eliminating the designation of the number of individuals comprising the Department of Education.

During the 1917 meeting, the Department was also assigned the responsibility of preparing the programs for the annual meeting. This duty was removed by amendments to the Bylaws in 1919 and at the same time two Bureaus were assigned to the Department of Education, the Bureau of Annual Program and the Bureau

of Professional Education. The duties assigned to the newly created Bureau of Professional Education appeared to be the developing of a public relations service between the practicing physicians and the lay public and to encourage courses of graduate character.

The adoption of a new Constitution and Bylaws in 1923 permits recognition of the pattern of organizational structure of the American Osteopathic Association as it is known today. The newly adopted document established a Department of Professional Affairs to which was assigned a Bureau of Professional Education.

A Bureau of Colleges under the Department of Professional Affairs was established by the Board of Trustees in 1925. It was composed of a member of the Board of Trustees and a representative from each college, with members of the Bureau of Professional Education as ex officio members. This Bureau was assigned the following function:

> To determine methods of cooperation between individual colleges, to make proper rules and regulations governing interchange of students, and to formulate proper regulations governing relations of A.O.A. and individual colleges.

The duties of the Bureau of Professional Education as outlined in the 1925-26 DIRECTORY OF THE A.O.A. were

> To formulate the policies of the profession in educational matters; to make proper inspection of colleges; to maintain proper relationships between the organized profession and its educational institutions; to properly disseminate the profession's educational policies and to enforce same.

The creation of the Bureau of Professional Education and Colleges in 1928 combined the Bureaus of Professional Education and the Bureau of Colleges as a single component agency of the Department of Professional Affairs. The duties of this Bureau were:

> To formulate the policies of the profession in educational matters; to maintain proper relationships between the organized profession and its educational institutions; to properly disseminate and enforce the profession's educational policies; to determine methods of cooperation between individual colleges; to stimulate and supervise A.O.A. activities in student recruiting; to make proper rules and regulations governing interchange of students and to formulate proper regulations governing relations of A.O.A. and individual colleges.

The DIRECTORY OF THE AMERICAN OSTEOPATHIC ASSOCIATION, 1929-30, listed a Committee on College Inspection. This Committee was created by the Board of Trustees for the purposes indicated by its name. It served as the agency for on-campus inspection of osteopathic colleges which submitted data to the Bureau of Professional Education and Colleges for evaluation and recommendation. The Chairman of the Bureau of Professional Education and Colleges served ex officio as chairman of the Committee on College Inspection. The Committee was discontinued in 1952 and its duties were reassigned to the Bureau of Professional Education and Colleges.

In 1942 the Board of Trustees and House of Delegates created a committee to study plans for a Council on Education and Hospitals, which resulted in the formation of the Council on Education of the American Osteopathic Association in 1948. This group is composed of representatives from the approved colleges, specialty boards, Bureau of Hospitals, Bureau of Professional Education and Colleges, Executive Committee of the A.O.A., and other allied organizations and agencies concerned with the process of training osteopathic physicians and making their services available to the public. The function of this Council is to act as a consulting group where the interrelated problems of professional training are studied and the results transmitted to the Bureau or Committee concerned.

The development of specialty training programs dictated the necessity of establishing an agency under the Bureau of Professional Education and Colleges to study and evaluate the specialty training programs leading to certification. The Advisory Board for Osteopathic Specialists was established in 1939.

To assist in the task of accrediting graduate education, the Committee on Accreditation of Postgraduate Training was established in 1944.

Within the past 15 years the profession, through the Bureau of Professional Education and Colleges and the American Association of Osteopathic Colleges, conducted a careful audit of the undergraduate training program in approved colleges. The results of this study, while gratifying in most areas, pointed up the need for improvement in faculty personnel, plant expansion, and teaching tools.

The organized profession met this challenge by creating the Osteopathic Progress Fund in 1942. Osteopathic physicians contributed $1,500,000 to this fund during the years 1943 through 1945. January, 1946, saw a new Osteopathic Progress Fund initiated with a goal of $7,500,000. The activities of the new drive were integrated into the activities of the state societies, and at this time a total exceeding $6,000,000 has been pledge or contributed. A program is now in operation which proposes to produce $85,000 monthly for osteopathic education for as long as the need exists. Efforts to date have achieved 60 per cent of this goal. The campaign will continue until the goal is reached.

The record of self-help evidenced by these campaigns and the contribution osteopathy is making toward the betterment of public health justify the position of the profession as it looks to the American public, philanthropic foundations, and other agencies for support. Moderate grants have been received from some of these areas. Support for research has come from governmental agencies. All of these grants are appreciated and have been of material assistance in moving toward the present goals in osteopathic education. But the needs of tomorrow become apparent in looking ahead. If osteopathic education is to continue its development at its present pace, the support given by the profession must be supplemented by the society which benefits from this progress in healing.

Journal A.O.A.
Vol. 54, No. 5

Trends in Osteopathic Education

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From the beginning of organized osteopathy, education and educational advancement have been among the primary objectives of the profession. The American Osteopathic Association and the American Association of Osteopathic Colleges have worked in close harmony toward one goal—the constant improvement of osteopathic education. Educational authorities outside the osteopathic profession have recognized the fact that osteopathic education has reached a status comparable to other professional educational programs in a much shorter time than it has taken other professional systems to attain their present status.

The osteopathic profession continues to emphasize the importance of its educational program by leading the way in American education in providing most of the finances required for the steady improvement of its schools. Leaders of the profession realize, as never before, that financial support of osteopathic colleges by members of the profession and the lay public must be continued indefinitely. It is realized that this financial support is necessary not only to maintain the present level of osteopathic education, but also to make it possible for osteopathic colleges to continue improvement in the training of osteopathic physicians and surgeons. This financial support is necessary and will be necessary for a long time to come.

Some of the trends in osteopathic education which will be presented are those in student enrollment, both preprofessional and professional, in requirements for admission, in the osteopathic curriculum, in the integration of the osteopathic concept into the educational program, in the cost of osteopathic education.

When the United States Government, through Public Law 346, made it possible financially for returning veterans of World War II to acquire a college education at both the undergraduate and professional level, our colleges and universities experienced a tremendous jump in enrollment. The year 1949 witnessed a much larger number of qualified applicants to osteopathic and other professional schools than ever before in American history. In 1950, the number of applicants to professional schools, especially those of the healing arts, started to show a steady decrease. This was due not only to the fact that most of the veterans of World War II had either completed their college education or had exhausted their so-called G.I. benefits, but also to the fact that the birth rate had dropped greatly during the great depression era. Therefore, the number of applicants to osteopathic colleges and other professional schools will decrease steadily until 1957. It is predicted that by 1960, because of the greatly increased birth rate from 1942 on, college enrollment will be nearly 100 per cent greater than it was in 1952-53.

Public Law 550, the Korean Bill of Rights, which provides for financial aid to veterans who have served in the Armed Forces after June, 1950, does not provide as much financial assistance as did Public Law 346, and will not enable as many students to enter colleges of the healing arts, where costs have steadily risen.

By 1960 America will be faced with tremendous problems in the educational field. It has been predicted that great expansion of the junior college program will be necessary to take care of the rapidly increasing number of young people desiring a college education. Universities, through their tax supported systems can be expected to expand, but liberal arts colleges, with their limited endowment in the face of growing educational costs, will find expansion difficult.

Osteopathic college enrollment in 1945 was the smallest since the early 1900's; only 556 students were enrolled in the six colleges. This enrollment steadily grew to the limited capacity of 1500 undergraduate students in 1948. The Osteopathic Progress Fund's provision for new college facilities, including new buildings and laboratories and larger faculties, made it possible for the capacity of the six colleges to be increased from 1500 to 1900 undergraduate students by 1950. In 1953 the colleges graduated 460 students, the largest graduating class in the history of modern osteopathic education.

Although the number of applicants to osteopathic colleges has steadily gone down since 1949 and 1950, the qualifications of the applicants have gone up. It can safely be said, therefore, that the total number of undergraduate students will not drop seriously during the interval before the "war babies" start clamoring for admission.

TRENDS IN REQUIREMENTS FOR ADMISSION

In the fall of 1953, 72 per cent of the entering freshmen in the six osteopathic colleges had earned baccalaureate degrees or advanced degrees during preprofessional training. Only four students, or less than 1 per cent, were admitted with the minimum of 2 years of preprofessional training. All osteopathic colleges now require a minimum of 3 years of preprofessional college training for admission.

Admission requirements of colleges in the field of healing arts have constantly grown greater because of the growing accumulation of knowledge in the sciences. Not long ago, for example, organic chemistry was taught in most colleges of the healing arts. Today a knowledge of organic chemistry must be acquired in the liberal arts college to serve as a foundation for the course in biologic chemistry, which is taught during the first year in the professional college. The minimum prerequisite requirements for entrance into an osteopathic college include 12 semester hours of chemistry, 8 semester hours of biology, 8 semester hours of physics, and 6 semester hours of English.

The average freshman in the osteopathic colleges during the past 2 years has completed twice the amount of chemistry required for admission, more than three times the amount of biologic science required, and more than twice the amount of English required. It is natural to expect a student contemplating entering the healing arts to major in one or more sciences during his preprofessional training. In most of the so-called premedical curricula, which have been set up in liberal arts colleges, a student is expected to major in either

chemistry or biology. There has been a growing tendency in some colleges and universities to allow students to major in the broader field of science, rather than to stipulate chemistry or biology, which makes it possible for the student to spend more time in the liberal arts courses, such as English, history, sociology, and philosophy. Admissions committees of osteopathic colleges have for several years been urging that preosteopathic students have more courses in English than are actually required and more courses in the general field of the humanities.

The Office of Education has initiated a series of studies in an effort to correlate preprofessional training with academic achievement during the first year of osteopathic training. So far, it has been found that there is no correlation between the amount of chemistry completed on the preprofessional level with achievement in biologic chemistry in the freshman year. The same observation can be made in regard to training in the biologic sciences and achievement in anatomy or physiology in the freshman year. There is, however, a noticeable correlation between the amount and quality of work done in the field of English and in the professional osteopathic course during the first year.

The amount of preprofessional work now required for entrance into a college of healing arts is being questioned by some educators. The minimum of 8 or 9 years of college training and internship now required of doctors undoubtedly could be reorganized to allow more training in the science of diagnosis and treatment of disease generally. For example, instead of making it necessary for a student to complete 3 years of college chemistry in order to start the study of biologic chemistry, it would be possible for a college of the healing arts to condense the whole into a 2-year course by emphasizing only those phases of chemistry dealing with the human body and the environment necessary for health. It would be feasible to require only 2 years of preprofessional college training and present a professional course of study covering 6 years, including the internship, which would give more time to emphasizing preventive medicine.

CURRICULUM TRENDS IN OSTEOPATHIC EDUCATION

The past decade has witnessed great activity and transition in education in the field of the healing arts; these years have been years of inventory taking and re-evaluation. The content, organization, and integration of the curricula of osteopathic colleges have undergone critical and careful scrutiny, and, as a result, many experimental programs have been activated. Teaching tools and methods have been improved. Full-time faculties have increased in size and are better balanced. Opportunities for research have increased tremendously, and research as a framework for teaching is starting to come into its own. Postgraduate and continuing education are now a part of the standard activities of all osteopathic colleges. Some state universities now are making it possible for osteopathic physicians and surgeons to take advantage of their continuing educational programs.

Osteopathic colleges have obtained modernized and new facilities, but many more are needed to permit osteopathic education to continue its progress, and these facilities must in large part continue to come from the profession itself. Not only is continued financial giving on the part of the profession necessary, but also actual giving of time by physicians who have proved themselves competent teachers.

Following the development and amazing improvement in the teaching of the basic sciences, osteopathic colleges have been concentrating on steady improvement of the teaching of the clinical phase of an osteopathic physician's training. Mistakes have been made, and they are being corrected. Today the profession can have complete confidence in the future pattern of osteopathic education, for never before in its history have so much thought and effort been given to the integration of the osteopathic concept throughout the entire undergraduate course and the integration of the clinical and preclinical phases of the course. This integration now is being extended into internship training, and educational leaders foresee that it will extend into specialty training.

COST TRENDS IN OSTEOPATHIC EDUCATION

Educational costs constantly are on the rise, not only to the individual students but to colleges as well. Prior to World War II, the high cost of education in the healing arts created a barrier which for the most part excluded all but students from affluent homes from the study of medicine. Following World War II the United States Government made it possible, through Public Law 346 (the original "G.I. Bill of Rights"), for veterans to study the healing arts. For the first time in the history of our country highly qualified young men with poor financial backgrounds were enabled to enter training programs for doctors. Since Public Law 550 (the Korean "Bill of Rights") does not provide as much financial aid as Public Law 346, the unfair financial barrier again is being raised.

On the average, an osteopathic student today must spend at least $1,500.00 a year in addition to tuition and fees. Books, supplies, and equipment cost approximately $450.00 during the first year. Living expenses average about $1,300.00 a year. The average tuition is $700.00 a year, making the total cost for a student in his first year at least $2,200.00 and nearly $9,000.00 for the 4-year osteopathic course. This cost does not cover the 3 or 4 years of preosteopathic training, the minimum of 12 months of intern training, or the cost of setting up in practice. The loan funds of the American Osteopathic Association, of the various divisional societies, and of the six osteopathic colleges are being stretched to their limits. Scholarships which are awarded by the Auxiliary to the American Osteopathic Association, a few divisional societies, and the colleges can aid only a comparatively few students.

Similarly, educational costs to the colleges have increased tremendously. The student in paying his yearly tuition of $700.00 is paying less than one-third of the actual cost of his education. The average osteopathic college spends approximately $2,400.00 a year per student in conducting the type of educational program which the profession has insisted upon.

Many members of the profession, through their contributions to the colleges, are helping to defray the educational cost. Those members must continue to give generously, and those who have not seen the wisdom of supporting their professional educational program, must start to give. Help from educational funds can be expected in the future, but most of it will be in the form of financial grants for special projects and not for current operating expenses. The profession has been generous in the past, but it must be more generous in the future if osteopathic education is to advance.

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Vol. 54, No. 5

Activities of the Bureau of Hospitals

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The Bureau of Hospitals is the organization within the American Osteopathic Association which is charged with the responsibility of inspecting and evaluating each hospital which requests recognition by the American Osteopathic Association for registration or for the privilege of training interns and/or residents.

The Bureau of Hospitals inspects and evaluates each hospital's application annually and, after making these annual inspections, prepares individual recommendations which are transmitted to the Board of Trustees of the American Osteopathic Association which passes upon the application of each hospital applicant. The Board of Trustees is the approving agency for all osteopathic hospitals.

The Board of Trustees has established minimum requirements for both classifications of hospitals. These requirements are published in the two booklets known as "Minimum Requirements and Standards for Osteopathic Hospitals Approved for the Training of Interns and/or Residents" and "Minimum Standards for Registered Hospitals."

BRIEF HISTORY OF THE BUREAU OF HOSPITALS

The Bureau of Hospitals was officially organized by the Board of Trustees of the American Osteopathic Association in 1921. During its earliest years of existence its activities resembled those of a committee. In the early 1930's, when the number of hospitals began to increase rapidly, the Bureau's activities developed into the administration of a joint hospital program for the American Osteopathic Association and the American College of Osteopathic Surgeons. In 1949 the American College of Osteopathic Surgeons officially withdrew from the program and since that time the Bureau of Hospitals has been responsible only to the Board of Trustees of the American Osteopathic Association, although the College of Surgeons and its members continue to cooperate in every way possible with the Bureau's activities.

ACTIVITIES OF THE BUREAU OF HOSPITALS

The Bureau of Hospitals sets up training programs in a manner which will bring about continuing education for osteopathic physicians. The training programs within osteopathic hospitals are coordinated with the undergraduate college training, which is under the direction of the Bureau of Professional Education and Colleges, in order that the best training possible can be furnished for the young osteopathic physician, whether he is preparing himself for general practice or further study in one of the specialties.

The Bureau conducts two meetings each year for the purpose of considering policies and programs pertaining to function of osteopathic hospitals, to consistently high standards for patient care and training programs for interns and residents. At one of these annual meetings an individual evaluation of each hospital application is made and recommendations are prepared to be transmitted to the Board of Trustees of the American Osteopathic Association.

The inspection of all hospital applicants is made annually by qualified inspectors who serve on a voluntary basis. These inspectors attend instruction courses directed by the Bureau. The entire inspection program has been standardized by means of the Bureau's Inspectors' Manual which is revised annually. With this manual as a standard guide, each hospital applicant may be inspected in a systematic manner that is uniform for all hospitals in the category of the applicant. The Bureau individually evaluates the physical plant and the professional staff activities of each individual hospital.

It is interesting to note the following data for the year 1953:

Applicants for registration	113
Applicants for intern training approval	85
Applications for residency training privileges	227
Total number of adult beds in hospitals approved for intern training	4,894
Total number of bassinettes in hospitals approved for intern training	1,031
Total number of beds in approved hospitals	5,925
Total number of adult beds in Registered Hospitals	2,264
Total number of bassinettes in Registered Hospitals	556
Total number of beds in Registered Hospitals	2,820

HOSPITAL ORGANIZATION

The Bureau does not dictate how any hospital shall conduct its private business, but does require that published standards be maintained. These standards outline a type of organization which will render a continuous and effective public health service and proper training for young physicians. To accomplish this purpose it is necessary that each hospital function under a local board of control, usually composed entirely or partially of laymen selected from the community. Such a board of control, whether made up of directors or trustees, is responsible for all activities conducted within the hospital which it governs.

The Bureau also recommends that the hospital organization, which its board of control represents, should function as an eleemosynary or nonprofit corporation, the type of organization which adapts itself effectively to the highest type of community health service.

The professional staff is formed of qualified physicians located in the community who, collectively, function as an organization which is required to have three divisions of service, namely, osteopathic medicine, surgery, and obstetrics.

The Bureau requires that the professional staff in each hospital approved by the American Osteopathic Association should be established and function under definite rules of procedure. The necessity of having the hospital administrator, in addition to handling detailed administrative matters, serve as a liaison officer between the professional staff and the hospital board of control, (directors or trustees) is recognized. It is also a requirement that all professional staff appointments and recommendations be verified by formal

board action. These staff appointments are usually made annually.

The Bureau maintains a consultation service available to all osteopathic hospitals for the purpose of aiding the establishment and maintenance of good technic in hospital procedures. This service is rendered upon request of the individual institution.

TRAINING PROGRAM

Intern Training—The Bureau of Hospitals is vitally interested in and responsible for intern training, which is a 1-year (12-month) training program in a general hospital. The program is organized so that an equal amount of time is spent in the three required departments of osteopathic medicine, surgery, and obstetrics. This program is designed primarily to further the preparation of the new physician for general practice. It is also a requirement before starting specialty training.

Residency Training—Residency training is defined by the Bureau of Hospitals as a full-time training period of not less than 1 year, in an approved osteopathic hospital. The program is planned and conducted for the purpose of providing advanced training in the designated specialty.

This program is designed to prepare the individual trainee for practice within a recognized specialty. The Bureau requires that such a residency training program must be a coordinated effort between the specialty in which the residency is conducted and the other allied departments within the hospital professional staff.

Clinical Clerkship—In recent years there has been established in selected approved osteopathic hospitals a staff of trainees known as clinical clerks. These trainees are senior students from approved osteopathic colleges. In reality, clinical clerk training programs come under the direct supervision of the Bureau of Professional Education and Colleges of the American Osteopathic Association.

Reference is made here to the clerkship training program because of its close relationship with the Bureau of Hospitals' intern and residency training program. These three training programs are carefully inspected and evaluated annually by the hospital inspectors in order that there will be no embarassment to the training program of any one of the three designated groups of trainees.

Over the years hospital training programs have gone through a consistent period of evolution, the result of a continuous study of technics and procedures. This process will be a continuing effort of the Bureau of Hospitals in order that community health service and patient care will improve consistently year by year.

Trends—Bureau of Hospitals, 1954

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Hospital care, like all medical care, is in a period of rapid transition. This transition is characterized by a movement from simple bed and board care to a service that is highly complex and specialized, involving medical, social, educational, financial, and other aspects of care. This change has created a new role for the hospital in the field of health.

Instead of offering a purely curative care, the hospital has developed into a basic institution providing technical facilities for health appraisal, diagnosis and treatment of disease, and an indispensable workshop for the practitioner. The impact of scientific advances, the changing methods of medical education and patterns of medical practice, and the modern treatment of disease have accelerated the obsolescence of hospital equipment and physical plant.

Because recent trends have attempted to bring services and facilities as close as possible to patients, both professional and lay groups have developed an increased interest in health standards and health care. One of the important contributing elements to the trend is the Hospital Survey and Construction (Hill-Burton) Program, with its emphasis on hospitals in smaller communities. Improvement and expansion programs have likewise developed. Hospital service now is one of the ten major service industries in this country.

Over the past few years there has been a tremendous increase in the demand for hospital services. In the last 15 years, annual hospital admissions have increased from 9 to 19 million. Growth in population, the nation's higher economic level, development of prepaid health plans, increasing awareness of health needs through health education, and trends in medical science and education have all contributed to this demand for hospital service. And modern medical care, as related to hospital services, goes far beyond the former concept of basic inpatient services.

One of the greatest growing needs, partly because of the high cost of specialized medical service and partly because of the increase in diagnostic centers, of which cancer detection clinics are notable examples, results from the increasing tendency for patients to seek diagnostic and therapeutic services through hospitals. In this instance the general practitioner finds himself somewhat excluded, although he is held accountable for the general health care of the community. The general practitioner finds himself between two forces, a mounting protest by patients against the high costs of medical care, both in and out of the hospital, and the increased facilities of public-supported institutions or institutions supported in some manner by tax funds.

Outpatient departments, group practice, home care, and rehabilitation programs are now an important part of medical service. Modern medical trends focus more and more upon the promotion of health services for ambulatory patients. To date, a major defect in prepayment health plans is that they do not provide adequately for health services other than to hospital inpatients. It is quite possible that cognizance of this fact will soon be taken, and that prepayment health agencies will solve the problem. Certainly solution of this problem would do much to stop the abuse of the present plans and should allow an increased number of beds available for the critically ill patients.

Until recently, hospitals have been the workshops for the specialist. Possibly they will continue to be, but recent trends are to make provision for the general practitioner to have an opportunity to affiliate with hospitals and to become an active part of the staff. The degree of privileges of the general practitioner must depend upon his own ability and professional capacity to perform in the hospital. Modern medical education is making it possible for young physicians to expect and to accept staff affiliation. It can be anticipated that this trend will continue.

A majority of osteopathic intern training hospitals have outpatient departments. Affiliated or closely associated clinics are being found more often. Many registered hospitals may not have an outpatient service identified as such, but still are providing a similar or, in many cases, an identical service.

Over two-thirds of osteopathic intern-approved hospitals and approximately one-half of the registered hospitals are member hospitals in the Blue Cross Plans. All hospitals receive patients every day who carry Blue Cross or other prepaid hospitalization insurance.

The trend is to build hospitals in the rural areas where no other hospital facilities are available or where the facilities are not adequate. Most osteopathic hospitals are built by members of the profession with whatever outside help is available, but more and more they are receiving funds from outside the profession—mostly from private enterprise. Some osteopathic hospitals have received tax support, including funds provided under the Hill-Burton Act. This is a trend which will continue.

Some 20 years ago there developed a trend for hospital staff physicians to turn from general practice toward specialization, a development necessary for the proper function of modern hospital professional staffs. Now, as noted above, there is a trend towards securing again the place of the general practitioner on the staff, in order to provide better hospital patient care. To better prepare the young physician for general practice, a second-year internship has become established. It is anticipated that programs for training new physisians for general practice will be continually improved.

In recent years there has developed in most of the osteopathic hospitals two committees which have produced definite trends. These two committees are: a Hospitality Mortality Committee and a Tissue Committee. These two committees have reduced the amount of unnecessary surgery and the amount of elective surgery and have shown the staffs how they can provide a more nearly adequate service to all patients. The further this study is continued, the lower will be the percentage of elective surgery, and questionable or unnecessary surgery will be markedly lessened.

Development of team work within hospitals means comprehensive, competent service to the patient by more than the individual physician to whom the patient looks for care. Hospital team work increases the efficiency of patient care as it improves efficiency of the individuals who provide hospital staff services. This team work may be illustrated as follows:

The responsible physician, the hospital resident, the hospital intern, and, where present, the clinical clerk, all working as a unit, render a more efficient, coordinated, and continuous service to the patient than formerly when the responsible physician made one daily patient visit.

Coordination of the efforts of the responsible physician, the service departments (radiologic and clinical laboratory departments), and the professional departments toward an early, complete, and accurate diagnosis makes it possible for the responsible physician to render or provide complete therapeutic measures as the individual case warrants.

A few years ago the hospital stay of patients was definitely shortened, particularly for surgical and obstetrical patients, as a result of successful experiences in early ambulation. Although the extremely short stay which was at one time common has been lengthened somewhat, the duration of hospitalization will undoubtedly continue to be much shorter than it was some 20 years ago.

The average age of hospital patients has become greater in recent years. This is undoubtedly because of the higher degree of efficiency of hospital practice and the growing numbers of older people. It is influenced also by the fact that it is now a common practice for middle-aged and old people to be hospitalized for thorough diagnostic surveys which, of course, results in the application of indicated therapies.

In recent years the number of osteopathic institutions making annual applications for approval of their intern and resident training programs has been rapidly becoming larger. Also in recent years, there has been a growing tendency for hospitals approved for intern and/or resident training to enlarge physical plants and to broaden the scope of professional services. These two facts have made it necessary to make a change in the intern-bed ratio, and further changes are anticipated.

As a result of these and other trends which demand greater and greater efficiency in hospital services and better training of new physicians, as well as more facilities for adequate hospital care, it is necessary for the Bureau of Hospitals of the American Osteopathic Association to study continually ways for increasing the number and efficiency of institutions in the osteopathic hospital system, all in the interest of better public health.

Educational Supplement
Vol. 7, No. 1, January, 1955

Current Activities in Osteopathic Research

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Research is the repeated, exhaustive, and critical search for new facts and for new factual relations between things already known. It is the persistent endeavor to acquire more significant knowledge about ourselves and our environment.

With each passing year, scientists go seeking into the darkness of the unknown and return with a few more facts to add to the growing stockpile of human knowledge. They also return with a heightened consciousness of man's ignorance of himself, and a desire to continue and expand the search.

The osteopathic profession sees signs of an emerging pattern—a possible basic formula—an understanding of the general principles which influence man's harmony, or disharmony, with his environment. Exhaustive examination of all aspects of each of the so-called disease entities is important. Man wants to know about the diseases which plague him. He wants the medical scientists to find cures, relief, and, if possible, prevention. The osteopathic profession wants this too, and is gearing its facilities for such studies.

The major effort of the research program now being conducted under osteopathic auspices is more nearly basic—more inquisitive concerning the underlying nature of man's adaptive abilities. Osteopathy seeks more knowledge of man's resistance and of his recuperative, reparative, and compensatory resources. Critical investigation of the interrelationships of the body systems is being carried forward as osteopathy continues seeking the answers to the important questions concerning man's health.

The osteopathic profession is represented in these matters by the Bureau of Research, a division of the Department of Professional Affairs. This Bureau acts for the Board of Trustees of the American Osteopathic Association in the management of grants assigned for research activities. Another function is to assist in the development and continuation of the Association's research program and to assure consistently high standards within that program.

The purpose of all research activities conducted under the aegis of the Association is to create a constantly growing reservoir of basic knowledge regarding the human body and its frailties from which understanding may be derived and to provide a basis for the development of superior technics for the betterment of human health. It is also the purpose of that research to utilize this and other knowledge for the development of such technics.

Present research activity is based upon earlier studies in the field conducted by Burns, Vollbrecht, Steunenberg, Whiting, Deason, and others who established the foundation upon which present, more extensive scientific investigations are grounded. The motivation to do research comes from within the scientist himself. The scientist must feel that he has had the major role in choosing his problem and that his study will contribute to the whole. For these reasons there is no assignment of research projects in osteopathic institutions.

By far the greatest amount of funds for osteopathic research comes from within the profession. For the fiscal year 1953-54 the Bureau of Research gave a rigid processing to requests totaling nearly $100,000, and the Association, through the Bureau, distributed $52,750 in approved grants. Some of the projects were held to be of such vital importance that additional funds were awarded by the Federal government. Dollars alone do not provide a sound research program, but they do provide the tools with which skilled investigators work. The Bureau feels that a greater return for money expended can be gained, not from a multiplicity of short-term projects of small scope, but from long-range studies of basic problems, problems related to the central purposes of osteopathy.

The outlook for the fiscal year 1954-55 is for a continuation of certain fundamental investigations and the initiation of a limited number of new ones. A total of more than $100,000.00 has been requested and a total of $66,100.00 has been granted.

Some of these projects merit attention. Members of the faculty of the Kirksville College of Osteopathy and Surgery are engaged in a broad but closely coordinated research program. Separate fields of specialization are represented in the team of scientists conducting studies of the anatomic relationships and movement characteristics of the vertebral spine and pelvis, coupled with investigation of chronic segmental facilitation, and the exchange between the somatic and autonomic nervous systems.

It is readily discernible that these studies pretty much cover a field of research into the scientific aspects of osteopathy's specific contribution to contemporary consideration of man and his frailties. Using equipment particularly designed to demonstrate and record these phenomena, the scientists are documenting pertinent information. Patterns of sweat gland and vascular activity influenced by musculoskeletal aberrations have been repeatedly demonstrated on a large scale. The more remote effects upon visceral tissue and the interchange between the nerve systems are presently under study and promise important revelations.

Application of heretofore unidentifiable nerve impulses requires sensitive electronic apparatus. Such apparatus has been assembled in the Kirksville laboratories, and its use holds promise of allowing the scientists working there to follow the cycle instigated by somatic stress.

The next important step is to determine the reflex activities of the viscera innervated by those segments which have shown imbalance of autonomic activity, motor activity, or pain sensitivity and combinations thereof. The kidney was considered the organ of choice because of its amenability to quantitative study and because of the investigators' qualifications in this field. This line of investigation has been conducted

under the direction of Dr. Irvin Korr as principal investigator.

Coordinated with this has been the work directed by Dr. J. S. Denslow, consisting of investigation of anatomic relationships and movement characteristics of joints and periarticular tissues. Specially designed technics of x-ray studies and analyses of the axial skeleton in various positions are employed in this program. This work is being integrated with the studies of chronic segmental facilitation through examinations of the same subjects.

A different approach to the study of the structure of the human body and the relation of structure to function is being conducted in New York under the auspices of the Osteopathic Hospital and Clinic of New York. These investigations vary from the usual approach in biologic research in that a physicist and engineer is applying his methods and technics to the problem. Dr. J. Marshall Hoag and Dr. Paul Rosenberg are the responsible investigators. Spinal motion is recorded on motion picture film with the aid of fluoroscopic x-ray. Mechanical properties of the tissues, which include the study of elasticity, dynamics, kinematics, statics, hydrostatics, and hydrodynamics, are receiving objective scientific laboratory investigation.

The Kansas City College of Osteopathy and Surgery is conducting two projects under grants from the American Osteopathic Association. Dr. Wilbur V. Cole is principal investigator in a continuation of his studies of neural end plates. These microscopic nerve endings play important roles in the transmission of nerve impulses. Microphotography of this highly specialized tissue has presented problems because of difficulties in staining. Dr. Cole has made progress through his use of staining solutions previously untried. The heterogeneity of the tissues that make up the myoneural junctions calls for a combination of stains capable of satisfying the different affinities for stains in the several parts of the tissue to be photographed.

Dr. Theodore Norris of the Department of Physiology at the Kansas City College is doing studies of the relationships between lesions due to spinal stress and the functioning of the thyroid gland. This is a long-term project which is still in its preliminary stages. At this point in the problem rats are being lesioned by three different methods and quantitative evaluation of the effects of somatic lesioning upon visceral activity is to be determined. This is an interesting example of how one scientist approaches the study of visceral effects of somatic lesions.

In the anatomy laboratories of the Philadelphia College of Osteopathy useful experimentation is now being directed by Dr. Angus Cathie in the preparation of a special type of anatomic specimens for study and teaching purposes. This material is an answer to the long-sought means of visualization of joint motion in the cadaveric specimen.

In Los Angeles, at the Louisa Burns Osteopathic Research Laboratory, Dr. Burns is continuing the cataloguing and analysis of thousands of case records concerning the osteopathic lesion syndrome. When these materials are subjected to statistical analysis they are expected to yield much vital information.

It should be mentioned that other qualified investigators in osteopathic institutions are conducting worth-while studies outside the auspices of the Bureau of Research and with the aid of funds from other sources.

While possibly not immediately apparent, the results of osteopathic research should in the future have vast implications for public health. If studies to date are confirmed in larger test series, methods will be found for predicting which people will develop heart and other disabling disease conditions.

From studies thus far made, tentative conclusions have been drawn that may link hidden structural changes in the body with heart disease, arthritis, diabetes, and other degenerative disease conditions, including possibly cancer.

In studies undertaken in the A.O.A. research program, new facts and factual relations between things already known are being sought with the hope that they will lead to increasingly effective protection against disease, not only for individuals but also for large groups of our population—wherever these newer methods can be applied. Nor is protection from the ravages of disease our single goal — osteopathic research is dedicated to raising the level of health.

Educational Supplement
Vol. 7, No. 1, January, 1955

Current Trends in Medical Research

TRUE B. EVELETH, D.O.
Secretary, Bureau of Research
Chicago

Any consideration of current trends in the field of osteopathic research must be seen against the broad background of trends in research in general and of medical research in particular. Without a doubt, most of the fundamental changes occurring in our lifetime have their shadowy beginnings, directly or indirectly, in the research laboratory. A few months ago we saw the total and instantaneous destruction of an island by a force that began, a few decades ago, as the speculations of mild-mannered professors. During the war, other dramatic achievements were made by researchers working on military problems. In the main, those problems were solved. We learned how to kill faster and in greater quantity and with less individual effort. The public was impressed by the increase in efficiency.

But those research achievements were directed towards death. Much of research has been dedicated, with great success, toward preserving, prolonging, and improving human life. The infectious diseases are coming under man's control, allowing a shift of research facilities and attention to the newer problems related to man's aging. New technics have been developed for early detection of many illnesses, for a more efficient and less painful surgery, for more effective drugging, for safer childbirth. These things, too, have impressed the public. The result has been an ever-increasing amount of support for scientific research.

To illustrate this expansion of research support, a few figures should be presented. While money expended is never by itself the true measure of the size and value of a research program, it is often the only tangible yardstick that can be used to indicate certain trends.

Between 1941 and 1951 financial support of medical research in the United States grew tenfold, from a 1941 figure of $18,000,000 to a 1951 total of $181,000,000. Another significant change has been in the sources of these funds. In the year 1941 the United States Government contributed roughly 25 per cent of the total, while by 1951 it was contributing 42 per cent. While there have been recent budget cut-backs in certain specific programs and projects, most experts believe that government support will be maintained at a high rate and will probably expand.

As the various research programs were initiated or expanded there was a growing specialization, and thus both duplication and loss of contact developed. New knowledge is only as useful as its rate and breadth of dissemination. Consequently, a recent trend has been the setting up of centers to coordinate research programs and to expedite the exchange of information between them.

Another heartening trend is the increasing amount of research devoted to the problems arising from the chronic degenerative diseases. While the government has led the way in supporting such research, a growing public awareness of the problem has also meant a greater amount of private funds available.

The picture is not completely rosy, however. Over the past decade medical research has been receiving only about 5 per cent of the total funds, public and private, spent upon scientific research. Admittedly, this has been a period of wars, cold and hot, but it is a sad commentary on the existing value systems when 95 per cent of research money is spent on machines and weapons and only 5 per cent on health!

During the last several years a number of institutions have begun to scrutinize their research programs closely. Some had overextended themselves in the effort to obtain research grants. With an ever-increasing financial dependence on research grants, certain schools have found themselves in the position of having large laboratories and long-term commitments to research staffs, while basing their operations on year-to-year grants which could be curtailed or cut off completely at any time. Also, much of the sponsored research was on applied science, the so-called "gimmick" research, which is of little interest to the investigator and is a waste of his talents. Worse yet, some of the schools found their key men wrapped up in military projects, which, by their secret nature, are incompatible with the nature and goals of free research. Not only were these men cut off from the normal channels of communication which exist in the community of scholars, but worse, they were diverted from their essential teaching function. These problems are pushing some administrators to a growing caution concerning the type of project for which they will seek or accept financial support.

Another problem of medical research has been in finding qualified assistants to principal investigators. Unless younger men are trained thoroughly in the discipline of research, medical science in general will be unable to expand its research program beyond its present scope. The problem has been recognized, and some steps have been taken toward its solution. More funds are required, and they must be administered on a long-term basis if qualified young men are to be attracted to the research laboratory.

RESEARCH UNDER OSTEOPATHIC AUSPICES

How does research under the auspices of the osteopathic profession compare in its general dimensions with current trends in medical research? There are many similarities and some striking differences.

Osteopathic research has had increased support at an even greater rate than medical research in general. While financial support for medical research was expanding tenfold between 1941 and 1951 osteopathic research support from the American Osteopathic Association increased twelvefold. Support from all sources, including the Federal government, increased to fifteen times the 1941 contribution. As the value of osteopathic research has been recognized Federal support has increased.

Osteopathic research has grown at a rate greater than medical research as a whole, partly because some of its chief investigators have found within osteopathy a freedom to work upon the problems which are truly

basic to man's health. With an increasing number of qualified researchers and expanding physical facilities, osteopathic research can grow now only in direct ratio to the amount of funds available.

The exchange of information has also accelerated. First of all, osteopathic research has had more information to exchange. Second, more scientific circles outside osteopathy have come around to its position on the unity of the organism, on preventive medicine, and other viewpoints stemming from the osteopathic concept and supported by osteopathic research. Third, the high quality of recent investigations has made new media accessible for the publication of papers.

The trend toward emphasis on chronic degenerative disease is relatively new in medical research, but has long been a major problem of osteopathic scientists. In this case, the profession was ahead of the other branches of the healing arts.

Strict adherence to osteopathic principles, that is, concentrating on the weaknesses in man and on the basic disease processes, has obviated any tendency to engage in the so-called "gimmick" research. No osteopathic scientists have disappeared behind a laboratory door marked "Secret." No osteopathic college has become dependent upon research grants for maintenance of the institution.

Many of the problems faced by other groups doing biologic research simply do not occur in osteopathic research. A large part of this can be credited to the setting up of the Bureau of Research. This Bureau serves as a watchdog over and a coordinator of research projects. Because of limited facilities, the Bureau must operate under its policy statement requiring that all projects be confined to principles, factors, and mechanisms which have a rather direct bearing on the central contribution made to the biologic sciences by the osteopathic concept. A responsibility lies with the profession to explore fully this concept in the laboratory. This is necessary first as a duty to the public and, second, because nonosteopathic investigators have long neglected this aspect of biologic science.

Prediction of the future is necessarily a risky business. However, certain assumptions can be made on the basis of current trends and future needs. Anyone familiar with current osteopathic research feels the excitement of being on the verge of discoveries having vast implications for man and his health. The question in the forefront is how to best implement those discoveries within the framework of present possibilities. Several trends come to mind.

There will most likely be a continuing growth of support, moral and financial. Osteopathic research may well attract more and more skilled investigators. This, in turn, will draw those students best qualified to become principal investigators and valuable teachers. The tendency to provide more funds for research assistants, to formulate sounder programs on a long-range basis, and to expand research facilities will, in all likelihood, continue.

Another trend will be to set up research programs in places where research activity has in the past been nonexistent. Due to an expansion and improvement of facilities in recent times, these places are now ready to exploit this great opportunity and duty, particularly in the field of clinical research.

There is a widening interest throughout the profession in the research program as evidenced by a conference on research which was held in New York City in the fall of 1953. This meeting was called and sponsored by the Foundation for Research of the New York Academy of Osteopathy, Inc. Sixteen persons were selected to participate on the basis of their interest in fundamental and clincal research. A similar meeting was held in June, 1954. Much constructive discussion was developed in these intensive, though unofficial, conferences.

The history of past osteopathic research as a part of the whole stream of the study of man is great; the future history is even greater. If we are to play an active part in that future history, osteopathic research demands our most serious attention and our most devoted support.

Conclusion

ALEXANDER LEVITT, D.O.
Brooklyn

The osteopathic profession, through the agencies of the American Osteopathic Association and its affiliates, is carrying out the primary aims and purposes for which osteopathic medicine was founded by Dr. Still and developed further by those who followed him.

These primary aims and purposes include highly placed objectives—to preserve, emphasize, and extend in medical education, health services, and research those values, principles, and precepts that distinguish the osteopathic philosophy and practice of the healing art.

REGISTRY OF OSTEOPATHIC HOSPITALS

HOSPITALS APPROVED FOR TRAINING OF INTERNS

(For the Period from July 1, 1954, to June 30, 1955)

The length of American Osteopathic Association approved intern training is 12 months.

Allentown Osteopathic Hospital, Allentown, Pennsylvania
Amarillo Osteopathic Hospital, Amarillo, Texas
Art Centre Hospital, Detroit, Michigan
Bangor Osteopathic Hospital, Bangor, Maine
Bashline-Rossman Osteopathic Hospital and Clinic, Grove City, Pennsylvania
Bay View Hospital, Bay Village, Ohio
Blackwood Clinic-Hospital, Comanche, Texas
Burbank Hospital, Burbank, California
Burton Heights Osteopathic Hospital, Grand Rapids, Michigan
Cape Osteopathic Hospital, Cape Girardeau, Missouri
Carson City Hospital, Carson City, Michigan
Charles E. Still Osteopathic Hospital, Jefferson City, Missouri
Chicago Osteopathic Hospital, Chicago, Illinois
Civic Center Hospital, Oakland, California
Clare General Hospital, Clare, Michigan
Community Hospital, Houston, Texas
Corpus Christi Osteopathic Hospital, Corpus Christi, Texas
Dallas Osteopathic Hospital, Dallas, Texas
Davenport Osteopathic Hospital, Davenport, Iowa
Des Moines General Hospital, Des Moines, Iowa
Detroit Osteopathic Hospital, Detroit, Michigan
Doctors Hospital, Columbus, Ohio
Doctors Hospital, Los Angeles, California
Donovan Osteopathic Hospital and Clinic, Raton, New Mexico
Erie Osteopathic Hospital, Erie, Pennsylvania
Farrow Hospital, Erie, Pennsylvania
Flint General Hospital, Flint, Michigan
Flint Osteopathic Hospital, Flint, Michigan
Forest Hill Hospital, Cleveland, Ohio
Fort Worth Osteopathic Hospital, Fort Worth, Texas
Garden City Hospital, Garden City, Michigan
Gleason Hospital, Larned, Kansas
Glendale Community Hospital, Glendale, California
Grand Rapids Osteopathic Hospital, Grand Rapids, Michigan
Grandview Hospital, Dayton, Ohio
Green Cross General Hospital, Akron, Ohio
Hillside Hospital, San Diego, California
Hospitals of the Kansas City College of Osteopathy and Surgery
  Osteopathic Hospital, Kansas City, Missouri
  Conley Maternity Hospital, Kansas City, Missouri
Hospitals of Philadelphia College of Osteopathy
  The Hospital of Philadelphia College of Osteopathy, Philadelphia, Pennsylvania
  North Center Hospital of Philadelphia College of Osteopathy, Philadelphia, Pennsylvania
Houston Osteopathic Hospital, Houston, Texas
Kirksville Osteopathic Hospital, Kirksville, Missouri
Lakeside Hospital, Kansas City, Missouri
Lakeview Hospital, Milwaukee, Wisconsin
Lamb Memorial Hospital, Denver, Colorado
Lancaster Osteopathic Hospital, Lancaster, Pennsylvania
Laughlin Hospital and Clinic, Kirksville, Missouri
Los Angeles County Osteopathic Hospital, Los Angeles, California
Madison Street Hospital, Seattle, Washington
Magnolia-Los Cerritos Hospitals, Long Beach, California
  Magnolia Hospital, Long Beach, Calif.
  Los Cerritos Maternity Hospital, Long Beach, Calif.
Mahoning Valley Green Cross Hospital, Warren, Ohio
Marietta Osteopathic Hospital, Marietta, Ohio
Massachusetts Osteopathic Hospital, Boston, Massachusetts
Maywood Hospital, Maywood, California
McCormick Osteopathic Hospital and Clinic, Moberly, Missouri
McDowell Osteopathic Hospital, Phoenix, Arizona
McLaughlin Osteopathic Hospital, Lansing, Michigan
Mesa Memorial Hospital, Grand Junction, Colorado
Metropolitan Hospital, Philadelphia, Pennsylvania
Monte Sano Hospital, Los Angeles, California
Mount Clemens General Hospital, Mount Clemens, Michigan
Muskegon Osteopathic Hospital, Muskegon, Michigan
Normandy Osteopathic Hospital, St. Louis, Missouri
Oklahoma Osteopathic Hospital, Tulsa, Oklahoma
Osteopathic General Hospital of Rhode Island, Edgewood, Cranston, Rhode Island
Osteopathic Hospital of Harrisburg, Harrisburg, Pennsylvania
Osteopathic Hospital of Maine, Portland, Maine
Park View Hospital, Los Angeles, California
Parkview Hospital, Toledo, Ohio
Portland Osteopathic Hospital, Portland, Oregon
Riverside Osteopathic Hospital, Trenton, Michigan
Riverview Osteopathic Hospital, Norristown, Pennsylvania
Rocky Mountain Osteopathic Hospital, Denver, Colorado
Saginaw Osteopathic Hospital, Saginaw, Michigan
San Gabriel Valley Hospital, San Gabriel, California
South Bend Osteopathic Hospital, South Bend, Indiana
Stevens Point Osteopathic Hospital, Dallas, Texas
Still Osteopathic Hospital, Des Moines, Iowa
Traverse City Osteopathic Hospital, Traverse City, Indiana
Waldo General Hospital, Seattle, Washington
Waterville Osteopathic Hospital, Waterville, Maine
West Side Osteopathic Hospital of York, York, Pennsylvania
Wetzel Osteopathic Hospital, Clinton, Missouri
Wilden Osteopathic Hospital, Des Moines, Iowa
Zieger Osteopathic Hospital, Detroit, Michigan

REGISTERED OSTEOPATHIC HOSPITALS

(For the Period from July 1, 1954, to June 30, 1955)

Albuquerque Osteopathic Hospital, Albuquerque, New Mexico
Altadena Community Hospital, Altadena, California
Alva Osteopathic Hospital, Alva, Oklahoma
Aransas Pass Hospital, Aransas Pass, Texas
Aspermont Hospital and Clinic, Aspermont, Texas
Axtell Osteopathic Hospital, Princeton, Missouri
Battle Creek Hospital, Battle Creek, Iowa
Bay Osteopathic Hospital, Bay City, Michigan
Big Sandy Clinic and Hospital, Big Sandy, Texas
Bonduel Clinic and Hospital, Bonduel, Wisconsin
Bury Osteopathic Clinic and Hospital, Clayton, Missouri
Carlsbad Osteopathic Hospital, Carlsbad, New Mexico
Clinic Hospital, Nowata, Oklahoma
Coats-Brown Clinic and Hospital, Tyler, Texas
Colorado Hospital, Canon City, Colorado
Cottage Hospital, Oildale, California
Cottage Hospital, Pomona, California
Crews Hospital and Clinic, Gonzales, Texas
Currey Clinic-Hospital, Mt. Pleasant, Texas
Delgado Green Cross Hospital, Ysleta, Texas
Denison Hospital and Clinic, Denison, Texas
Devine Brothers Foundation Hospital, Kansas City, Missouri
Doctors Hospital, Albuquerque, New Mexico
Doctors' Hospital, Jacksonville, Florida
Doctors Hospital of St. Petersburg, St. Petersburg, Florida
Donley Osteopathic Hospital, Kingman, Kansas
Dora Garrison Hospital, Garrison, Texas
East Liverpool Osteopathic Hospital, East Liverpool, Ohio
Edgewater Hospital, Milwaukee, Wisconsin
Elliston Clinic and Hospital, Covington, Tennessee
Elm Street Hospital and Clinic, Denton, Texas
Elm Street Osteopathic Hospital, Battle Creek, Michigan
Elmo Osteopathic Hospital, Elmo, Missouri
Forest Glen Hospital, Canyonville, Oregon
Fremont Clinic and Hospital, Riverton, Wyoming
General Osteopathic Hospital, St. Joseph, Missouri
Glendale Emergency Hospital, Glendale, California
Granby Community Hospital, Granby, Missouri
Groom Osteopathic Hospital, Groom, Texas
Guymon Osteopathic Hospital, Guymon, Oklahoma
Hinton Community Hospital, Hinton, Oklahoma
Humphreys Osteopathic Hospital, Tuscumbia, Missouri
Hustisford Hospital and Clinic, Hustisford, Wisconsin
Jackson Osteopathic Hospital, Jackson, Michigan
Joplin General Hospital, Joplin, Missouri
Lawrence Osteopathic Hospital, Byron, Michigan
Leopold Hospital, Garden City, Kansas
Lubbock Osteopathic Hospital, Lubbock, Texas
Manning General Hospital, Manning, Iowa
Marshfield General Hospital, Marshfield, Wisconsin
Mason Clinic and Hospital, Mason, West Virginia
McLaughlin Osteopathic Hospital, Loving, New Mexico
Medford Osteopathic Hospital, Medford, Oregon
Memorial Osteopathic Hospital, Elizabeth, New Jersey
Mercy Hospital, St. Joseph, Missouri
Mesa Osteopathic Hospital, Mesa, Arizona
Mexico General Hospital, Mexico, Missouri
Mineral Area Osteopathic Hospital, Farmington, Missouri
Mineral Spring Hospital, Louisiana, Missouri
Mt. Pleasant Hospital and Clinic, Mt. Pleasant, Texas
New Mexico Osteopathic Hospital, Albuquerque, New Mexico
North Jersey Osteopathic General Hospital, Dumont, New Jersey
Northeast Osteopathic Hospital, Kansas City, Missouri
Northwest Hospital, Miami, Florida
Norwood Hospital, Mineral Wells, Texas
Okmulgee Osteopathic Hospital, Okmulgee, Oklahoma
Ontario Community Hospital, Ontario, California
Orlando Osteopathic Hospital, Orlando, Florida
Osborn's Clinic, Colony, Kansas
Osteopathic Hospital of Wichita, Wichita, Kansas
Osteopathic Memorial Hospital, Greeley, Colorado
Ottawa Arthritis Sanatorium and Diagnostic Clinic, Ottawa, Illinois
Ozark Osteopathic Hospital, Springfield, Missouri
Park Avenue Hospital, Pomona, California
Point Clinic and Hospital, Point Pleasant, West Virginia
Pool Memorial Hospital, Lindsay, Oklahoma
Porter Clinic-Hospital, Lubbock, Texas
Redfield Clinic Hospital, Redfield, Iowa
Reid Hospital and Clinic, Bethany, Missouri
Ridgewood Hospital, Daytona Beach, Florida
Riley Sanatorium, North Muskegon, Michigan
Riverside's Osteopathic Hospital, Riverside, California
Roswell Osteopathic Hospital, Roswell, New Mexico
Saco Osteopathic Hospital, Saco, Maine
San Antonio Osteopathic Hospital, San Antonio, Texas
Sandusky Hospital, Sandusky, Michigan
Sheridan Community Hospital, Sheridan, Michigan
Spring Lake Heights Hospital, Spring Lake Heights, New Jersey
Steele City Osteopathic Hospital, Steele City, Nebraska
Still-Hildreth Osteopathic Sanatorium, Macon, Missouri
Still-Hildreth Osteopathic Sanatorium, Tulsa, Oklahoma
Stone Memorial Hospital, Carthage, Missouri
Stratton Hospital and Clinic, Cuero, Texas
Tigua General Hospital, El Paso, Texas
Troy Community Hospital, Troy, Pennsylvania
Tucson General Hospital, Tucson, Arizona
Wallace Memorial Hospital, Fresno, California
Washington Hospital, Culver City, California
Weirton Osteopathic Hospital, Weirton, West Virginia
Wellsburg Eye and Ear Hospital, Wellsburg, West Virginia
Wetzel Osteopathic Hospital, Carrollton, Missouri
Whitaker Osteopathic Hospital, Moberly, Missouri
Willamette Osteopathic Hospital, Albany, Oregon
Willard General Hospital, Manchester, Iowa
Wolfe-Duphorne Hospital, Athens, Texas

Journal A.O.A.
Vol. 54, No. 5

HOSPITALS APPROVED FOR TRAINING OF RESIDENTS

(All Residencies Approved for the Period from July 1, 1954, to June 30, 1955)

The length of the American Osteopathic Association approved training program for each specialty is 3 years. Each hospital is approved for such program but requires recertification each year.

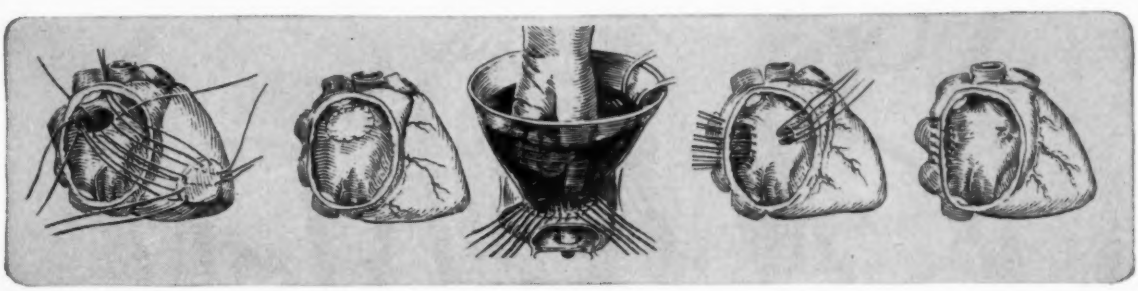
HOSPITAL	RESIDENCIES	NAME
Allentown Osteopathic Hospital Allentown, Pennsylvania	1	Roentgenology
Art Centre Hospital Detroit, Michigan	2	Anesthesiology
	1	Internal Medicine
	1	Obstetrical-Gynecological Surgery
	1	Pathology
	2	Radiology
	2	Surgery
Bangor Osteopathic Hospital Bangor, Maine	1	Roentgenology
	1	Surgery
Bay View Hospital Bay Village, Ohio	1	Diagnostic Roentgenology
Burton Heights Osteopathic Hospital Grand Rapids, Michigan	1	Diagnostic Roentgenology
	1	Surgery
Chicago Osteopathic Hospital Chicago, Illinois	1	Anesthesiology
	2	Internal Medicine
	1	Obstetrics & Gynecology
	1	Pathology
	1	Diagnostic Roentgenology
	1	Surgery
Des Moines General Hospital Des Moines, Iowa	1	Anesthesiology
	1	Radiology
	2	Surgery
Detroit Osteopathic Hospital Detroit, Michigan	4	Anesthesiology
	3	Internal Medicine
	5	Obstetrics
	1	Ophthalmology & Otorhinolaryngology
	2	Orthopedic Surgery
	3	Pathology
	3	Roentgenology
	6	Surgery
Doctors Hospital Columbus, Ohio	2	Anesthesiology
	2	Internal Medicine
	1	Obstetrics
	1	Ophthalmology & Otorhinolaryngology
	1	Orthopedic Surgery
	2	Roentgenology
	3	Surgery
Doctors Hospital Los Angeles, California	2	Surgery
Flint Osteopathic Hospital Flint, Michigan	1	Anesthesiology
	1	Internal Medicine
	1	Obstetrics & Gynecology
	1	Pathology
	1	Pediatrics
	1	Radiology
	1	Surgery
Garden City Hospital Garden City, Michigan	1	Diagnostic Roentgenology
	1	Obstetrical-Gynecological Surgery
Grand Rapids Osteopathic Hospital Grand Rapids, Michigan	1	Obstetrical-Gynecological Surgery
	1	Roentgenology
	1	Surgery
Grandview Hospital Dayton, Ohio	1	Anesthesiology
	1	Internal Medicine
	1	Obstetrics
	1	Ophthalmology & Otorhinolaryngology
	1	Orthopedic Surgery
	1	Roentgenology
	2	Surgery
Green Cross General Hospital Akron, Ohio	1	Anesthesiology
Hospitals of the Kansas City College of Osteopathy and Surgery Kansas City, Missouri	2	Anesthesiology
	3	Internal Medicine
	3	Obstetrics & Gynecology
	2	Orthopedic Surgery
	2	Pathology
	3	Roentgenology
	3	Surgery
	1	Urological Surgery
Hospitals of Philadelphia College of Osteopathy Philadelphia, Pennsylvania	2	Anesthesiology
	3	Internal Medicine
	2	Obstetrical-Gynecological Surgery
	1	Ophthalmology & Otorhinolaryngology
	4	Pathology
	2	Pediatrics
	3	Radiology
	4	Surgery
Kirksville Osteopathic Hospital Kirksville, Missouri	2	Anesthesiology
	1	Diagnostic Roentgenology
	1	Internal Medicine
	2	Ophthalmology & Otorhinolaryngology
	2	Pathology
	2	Surgery
Lakeside Hospital Kansas City, Missouri	1	Anesthesiology
	1	Radiology
	2	Surgery
Lakeview Hospital Milwaukee, Wisconsin	1	Internal Medicine
	1	Surgery
Lamb Memorial Hospital Denver, Colorado	1	Surgery
Lancaster Osteopathic Hospital Lancaster, Pennsylvania	1	Roentgenology
	2	Surgery
Los Angeles County Osteopathic Hospital Los Angeles, California	2	Anesthesiology
	6	Internal Medicine
	2	Neurology and Neurosurgery
	2	Obstetrics & Gynecology
	2	Ophthalmology & Otorhinolaryngology
	2	Orthopedic Surgery
	4	Pathology
	2	Pediatrics
	4	Radiology
	3	Surgery
	2	Urological Surgery
Massachusetts Osteopathic Hospital Boston, Massachusetts	1	Obstetrical-Gynecological Surgery
	1	Surgery
Maywood Hospital Maywood, California	1	Surgery
Mount Clemens General Hospital Mount Clemens, Michigan	1	Anesthesiology
	1	Diagnostic Roentgenology
	1	Internal Medicine
	1	Surgery
Muskegon Osteopathic Hospital Muskegon, Michigan	1	Diagnostic Roentgenology
Normandy Osteopathic Hospital St. Louis, Missouri	1	Anesthesiology
	1	Surgery
Oklahoma Osteopathic Hospital Tulsa, Oklahoma	1	Surgery
Osteopathic Hospital of Maine Portland, Maine	1	Anesthesiology
	1	Internal Medicine
	1	Roentgenology
	1	Surgery
Parkview Hospital Toledo, Ohio	1	Diagnostic Roentgenology
	1	Surgery
Riverside Osteopathic Hospital Trenton, Michigan	1	Anesthesiology
	1	Obstetrics
	1	Surgery
Riverview Osteopathic Hospital Norristown, Pennsylvania	1	Diagnostic Roentgenology
	1	Surgery
Rocky Mountain Osteopathic Hospital Denver, Colorado	1	Radiology
	1	Surgery
Saginaw Osteopathic Hospital Saginaw, Michigan	1	Anesthesiology
	1	Surgery
South Bend Osteopathic Hospital South Bend, Indiana	1	Diagnostic Roentgenology
Stevens Park Osteopathic Hospital Dallas, Texas	1	Surgery
Still-Hildreth Osteopathic Sanatorium Macon, Missouri	2	Psychiatry
Still Osteopathic Hospital Des Moines, Iowa	1	Anesthesiology
	2	Internal Medicine
	1	Obstetrics & Gynecology
	1	Pathology
	1	Pediatrics
	1	Diagnostic Roentgenology
	2	Surgery
West Side Osteopathic Hospital of York York, Pennsylvania	1	Radiology
	1	Surgery
Wilden Hospital Des Moines, Iowa	1	Internal Medicine
Zieger Osteopathic Hospital Detroit, Michigan	1	Obstetrics & Gynecology

Surgical device for patients with cardiac abnormalities

inspired by surgeon

The development of an effective surgical adjuvant depends, in a large measure, upon the professional inspiration, inventiveness and guidance contributed to Davol by the surgeon.

An excellent illustration of this professional inventiveness can be found in the newly perfected Dr. Gross Heart Well* . . . for use on patients with cardiac abnormalities. (This unique device is attached to the human heart to store and circulate blood during the operation, while the cardiac condition is being corrected.) Working in closest cooperation with Davol, Dr. Gross and his colleagues experimented with numerous designs and materials before evolving a well which seemed to be most satisfactory for their purposes.



Method of closure of large septal defect while working through an open atrial well. Left shows nylon sheet cut to approximate size and threaded with silk sutures run through the rim of the septal defect. Right shows plastic plate anchored in place and completely covering the defect.

Method of approach to interauricular septum: A rubber "well" is sewed with interrupted silk sutures to the right auricular wall, the wall is opened and blood rises in the well; through this column of blood the hand and fingers are inserted into the right auricle, and the finger can explore the edges of the septal defect.

Method of closure when openings of septal defects are not too wide. Left shows two interauricular septal holes with sutures in place by working through an "atrial well." Right shows sutures drawn tight to close both septal openings.

Only by this kind of persistent and painstaking exploration . . . coupled with 79 years experience in the processing of rubber . . . is Davol able to meet the specific rubber-goods requirements of the surgical specialist.

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Whatever your requirements in the way of custom-made surgical rubber adjuvants, Davol is at your service. Our research staff welcomes the opportunity to assist you in the advancement of the healing arts.

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*A Method for Surgical Closure of Interauricular Septal Defects. Robert F. Gross, M.D., F.A.C.S., Elton Watkins, Jr., M.D., Alfred A. Pomeranz, M.D., and Edward I. Goldsmith, M.D., Surgery, Gynecology and Obstetrics—January, 1953 Vol. 96, 1-23. Surgical Closure of Interauricular Septal Defects, Jl. A. M. A., March 7, 1953.

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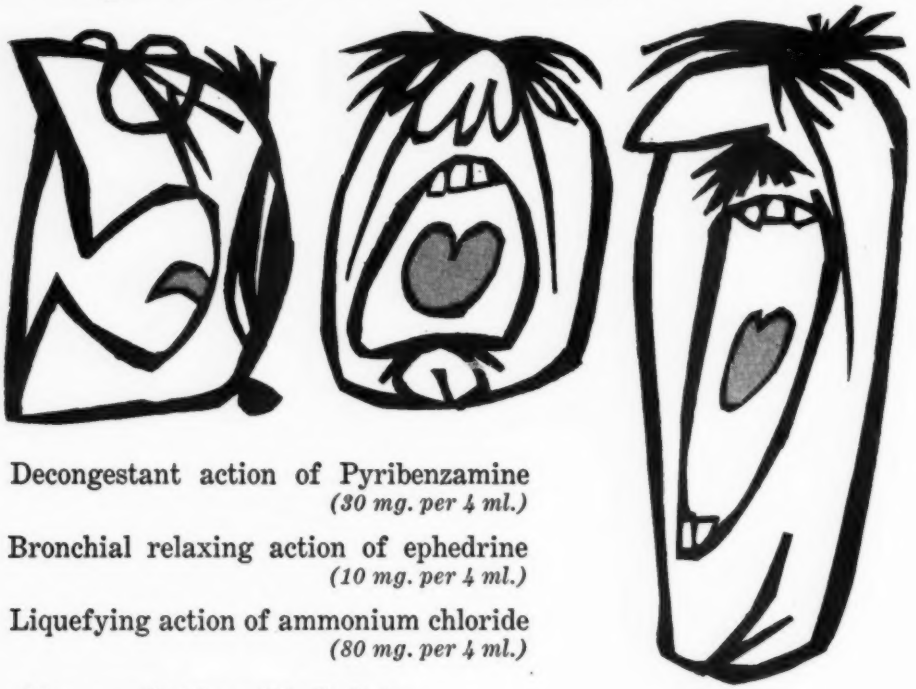

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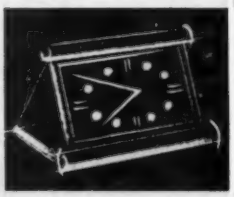

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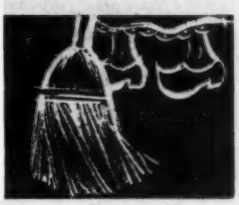
THOROUGH



Purgative: 4 teaspoonfuls or more before breakfast.

Aperient or Mild Laxative: 2 teaspoonfuls before breakfast or, if indicated, before other meals.

Administer in one-half glass of water, followed by second glass.

Phospho-Soda (Fleet) is a solution containing in each 100 cc. sodium biphosphate 48 Gm. and sodium phosphate 18 Gm.

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(Theominal with Rauwolfia serpentina)

Combines for synergistic action:

Theobromine	*(5 grains) 0.32 Gm.*
Luminal® (pioneer brand of phenobarbital)	*(1/6 grain) 10 mg.*
Rauwolfia serpentina alkaloids (alseroxylon fraction)	***1.5 mg.***

Theominal itself has been widely prescribed for essential hypertension for several decades. The addition of Rauwolfia serpentina alkaloids—purified alseroxylon fraction—to the well established Theominal formula represents a substantial improvement.

With the use of Theominal R.S., objective and subjective improvement can be obtained in a large percentage of hypertensive patients. There is mild and gradual but sustained reduction of excessive blood pressure and pulse rate to near normal levels. Striking symptomatic improvement occurs concurrently: alleviation of congestive headache, vertigo, dyspnea, nervous irritability, apprehension and insomnia.

With Theominal R.S. medication the antihypertensive action of Luminal and theobromine may be evident in a few days, whereas a week or more may elapse before the Rauwolfia component exhibits its maximum effectiveness. However, the sense of well being due to Rauwolfia is experienced within a few days of medication and usually precedes the development of the maximum antihypertensive effect. Theominal R.S. is well tolerated.

DOSAGE: The usual dose of Theominal R.S. is 1 tablet two or three times daily. When improvement has been maintained for a time, the dose may be reduced or medication suspended occasionally until its resumption is indicated.

HOW SUPPLIED: Theominal R.S. is supplied in bottles of 100 tablets.

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THEOMINAL (Each tablet contains theobromine 0.32 Gm. and Luminal 32 mg. and

THEOMINAL (M) (Each tablet contains theobromine 0.32 Gm. and Luminal 15 mg.)

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Conventions and Meetings

Announcements

American Osteopathic Association, Fifty-Ninth Annual Convention, Biltmore and Statler Hotels, Los Angeles, July 18-22. Program Chairman, W. Donald Baker, 3450 W. 43rd St., Los Angeles 8.

American College of Osteopathic Obstetricians and Gynecologists, annual meeting, Roosevelt Hotel, Jacksonville, Fla., February 7-10. Secretary, Harold K. Morgan, 3268 W. 32nd Ave., Denver 11.

American College of Osteopathic Surgeons, annual meeting, Hotel Statler, Washington, D. C., October 30-November 3. Administrative Secretary, Mrs. E. F. Martin, Box 474, Coral Gables 34, Fla.

American Osteopathic Academy of Orthopedics, annual meeting, Hotel Statler, Washington, D. C., October 30-November 3. Secretary, J. Paul Leonard, 2673 W. Grand Blvd., Detroit 8.

American Osteopathic College of Anesthesiologists, annual meeting, Hotel Statler, Washington, D. C., October 30-November 3. Secretary, Crawford M. Esterline, Box 155, Kirksville, Mo. Program Chairman, Harry J. Petri, Jr., 5 Deering St., Portland 3, Maine.

American Osteopathic College of Radiology, annual meeting, Hotel Statler, Washington, D. C., October 30-November 3. Secretary, F. A. Turfler, Jr., South Bend Osteopathic Hospital, 118 S. William St., South Bend 2, Indiana.

American Osteopathic Hospital Association, annual meeting, Hotel Statler, Washington, D. C., October 30-November 3. Executive Secretary, Mr. R. P. Chapman, 1013 Kahl Bldg., 326 W. Third St., Davenport, Iowa.

American Osteopathic Society of Proctology, annual clinical assembly, Bellevue-Stratford Hotel, Philadelphia, April 14-16. Secretary, Carl S. Stillman, Jr., 3523 Fifth Ave., San Diego 3, Calif. Program Chairman, Joseph W. Kenney, 718 Guaranty Bldg., Indianapolis 4.

Arizona, annual meeting, Paradise Inn, Phoenix, April 22-24. Secretary, H. E. Allshouse, 2243 N. 12th St., Phoenix 22.

Canada, annual meeting, Mount Royal Hotel, Montreal, October 29-31. Secretary, Miss Joyce S. Currie, 609 Medical Arts Bldg., Montreal 25. Program Chairman, A. E. Wilkinson, 616 Medical Arts Bldg., Montreal 25.

Eastern Osteopathic Association, annual meeting, Hotel Statler, New York City, April 2-3. Secretary, Frank B. Tompkins, Baltimore Life Bldg., Baltimore 1. Program Chairman, Chester D. Losee, 212 Prospect St., Westfield, N. J.

Georgia, annual meeting, Bon Air Hotel, Augusta, May 6-7. Secretary, Walter B. Elliott, Jr., 702 Mortgage Guarantee Bldg., Atlanta 3. Program Chairman, M. Lillian Bell, 2075 Ridgewood Drive, N. E., Atlanta 6.

Illinois, annual meeting, Faust Hotel, Rockford, April 29-May 1. Executive Secretary, Mr. Douglas Durkin, 5200 S. Ellis Ave., Chicago 15. Program Chairman, E. C. Andrews, Ottawa Arthritis Hospital and Diagnostic Clinic, Ottawa.

Indiana, annual meeting, French Lick Springs Hotel, French Lick Springs, May 14-17. Secretary, Arabelle B. Wolf, 809-13 Odd Fellows Bldg., Indianapolis 4. Program Chairman, Paul van B. Allen, 1500 N. Delaware St., Indianapolis 2.

Maine, annual meeting, Samoset Hotel, Rockland, June 17-18. Secretary, Roswell P. Bates, 72 Main St., Orono.

Massachusetts, annual meeting, Hotel Samoset, Boston, January 15-16. Executive Secretary, Mrs. Gladys M. Stockdale, 524 California St., Newtonville 60. Program Chairman, Raymond W. Boyd, 430 Broadway, Lynn.

New Mexico, annual meeting, Albuquerque, April 28-30. Secretary, Robert E. Smith, 205 N. First St., Lovington.

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Reference to RHINALGAN:
1. Van Alyea, O. E., and Donnelly, W. A.: E.E.N.&T. Monthly, 31, Nov. 1952.
2. Fox, S. L.: AMA Arch. Otolaryn., 53, 607-609, 1951.
3. Malomut, N., and Harber, A.: N.Y. Phys., 34, 14-18, 1950.
4. Lett, J. E., (Lt. Col. MC-USAF) Research Report, Dept. Otolaryn., USAF School Aviat. Med., 1952.
5. Hamilton, W. F., and Turnbull, F. M.: J. Amer. Pharm. Ass'n., 7, 378-382, 1950.
6. Browd, Victor L.: Rehabilitation of Hearing, 1950.
7. Kugelmass, I. Newton: Handbook of the Common Acute Infectious Diseases, 1949.

NEW O TOS-MO-SAN—A specific in Suppurative Ear Infections (Acute or Chronic).
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New York, annual meeting, Hotel Statler, New York City, October 14-15. Secretary, Robert E. Cole, 417 S. Main St., Geneva.

Northwest Osteopathic Convention, annual meeting, Portland, Ore., June 13-16. Program Chairman, Russell F. Kenaga, Sr., 2265 W. Burnside St., Portland 5.

Ohio, annual meeting, Neil House, Columbus, May 2-4. Executive Secretary, Mr. William S. Konold, 50 E. Broad St., Columbus 15.

Oregon: See Northwest Osteopathic Convention.

South Dakota, annual meeting, Sylvan Lake Hotel, Black Hills, June 5-7. Secretary, E. W. Hewlett, 417 W. 27th St., Sioux Falls. Program Chairman, Laurence S. Betts, Box 205, Huron.

Utah and Wyoming, joint annual meeting, Logan, Utah, June 26-27. Secretary, Utah Society of Osteopathic Physicians and Surgeons, Alice E. Houghton, 600 Zion's Savings Bank Bldg., Salt Lake City 1. Secretary, Wyoming Association of Osteopathic Physicians and Surgeons, G. A. Roulston, 2823 Central St., Cheyenne.

West Virginia, annual meeting, McClure Hotel, Wheeling, June 4-7. Secretary, Guy E. Morris, 542 Empire Bank Bldg., Clarksburg. Program Chairman, Joseph B. C. Bartram, Gilmor Clinic, Post Office Bldg., Glenville.

Wyoming: See Utah.

State and National Boards

ARIZONA

Those interested in professional examinations should contact Russell Peterson, D.O., secretary, Board of Registration and Examination in Medicine and Surgery, 2747 East McDowell Road, Phoenix.

Basic science examinations March 15 at the University of Arizona, Tucson. Applications must be filed 2 weeks prior to the examination. Address Herbert D. Rhodes, Ph.D., secretary, Basic Science Board, University of Arizona, Tucson.

COLORADO

Basic science examinations March 2-3 in the Lecture Room, second floor, Y.M.C.A. Bldg., E. 16th Ave. and Lincoln St., Denver. Applications must be filed by February 16. Address Esther B. Starks, D.O., secretary, Basic Science Board, 1459 Ogden St., Denver 18.

CONNECTICUT

Basic science examinations February 12 at New Haven. Applications must be filed 2 weeks prior to examination. Address Miss M. G. Reynolds, executive assistant, Board of Healing Arts, 52 Whitney Ave., New Haven 10.

FLORIDA

C. M. Becker, Winter Haven, and W. S. Horn, Palmetto, have been appointed to the Board of Osteopathic Examiners.

HAWAII

Examination dates by Territorial Law are usually the first Wednesday, Thursday, and Friday of January, April, July, and October. One of these dates is set for examination after approval of candidate's application by the Board. Address Frank O. Gladding, D.O., secretary, Board of Osteopathic Examiners, 504 Hawaiian Trust Bldg., Honolulu 13.

ILLINOIS

Examinations in April in Chicago. Address Mr. Frederic B. Selcke, Superintendent of Registration, Department of Registration and Education, State House, Springfield.

IOWA

Basic science examinations April 12 at the Capitol Bldg., Des Moines. Address Ben H. Peterson, Ph.D., secretary, Board of Basic Science Examiners, Coe College, Cedar Rapids.

KANSAS

Examinations February 17-19 at Topeka. Address Forrest H. Kendall, D.O., secretary, Board of Osteopathic Examination and Registration, 420½ Pennsylvania, Holton.

LOUISIANA

Carl E. Warden, Lake Charles, has been reappointed to the Board of Osteopathy for a term expiring July 14, 1958.

MICHIGAN

Basic science examinations February 12-13 at Detroit and Ann Arbor. Applications must be filed prior to February 1. Address Mrs. Anne Baker, secretary, Board of Examiners in the Basic Sciences, 116 Mason Bldg., Lansing.

MINNESOTA

Basic science examinations April 5-6 at the University of Minnesota, Minneapolis. Applications must be filed by March 10. Address Raymond N. Bieter, M.D., secretary, 105 Millard Hall, University of Minnesota, Minneapolis 14.

MONTANA

Examinations March 1. Address Asa Willard, D.O., secretary, Board of Osteopathic Examiners, Wilma Bldg., Missoula.

NEVADA

Basic science examinations April 5. Address Donald G. Clooney, Ph.D., secretary, Board of Examiners in the Basic Sciences, Box 9005, University Station, Reno.

NEW HAMPSHIRE

Examinations March 9-10 at Concord. Address John S. Wheeler, M.D., secretary, Board of Registration in Medicine, State House, Concord.

NEW MEXICO

Basic science examinations January 16. Address Mrs. Marguerite Cantrell, secretary, Board of Examiners in the Basic Sciences, P. O. Box 1522, Santa Fe.

NEW YORK

Examinations February 15-18. Applications must be filed not less than 30 days prior to examination. Address Dr. John W. Paige, Chief, Bureau of Professional Examinations and Registrations, 23 S. Pearl St., Albany 7.

OREGON

Basic science examinations March 5. Address Mr. John R. Richards, secretary, Board of Higher Education, Eugene.

RHODE ISLAND

Professional examinations April 7-8. Address Mr. Thomas B. Casey, Administrator of Professional Regulation, 366 State Office Bldg., Providence.

Basic science examinations in Room 366, State Office Bldg., Providence, February 9. Applications must be filed approximately 20 days prior to examination. Address Mr. Casey.

SOUTH DAKOTA

Examinations January 18-19 at Sioux Falls. Address Mr. John C. Foster, executive secretary, Board of Medical and Osteopathic Examiners, Room 300, First National Bank Bldg., Sioux Falls.

TENNESSEE

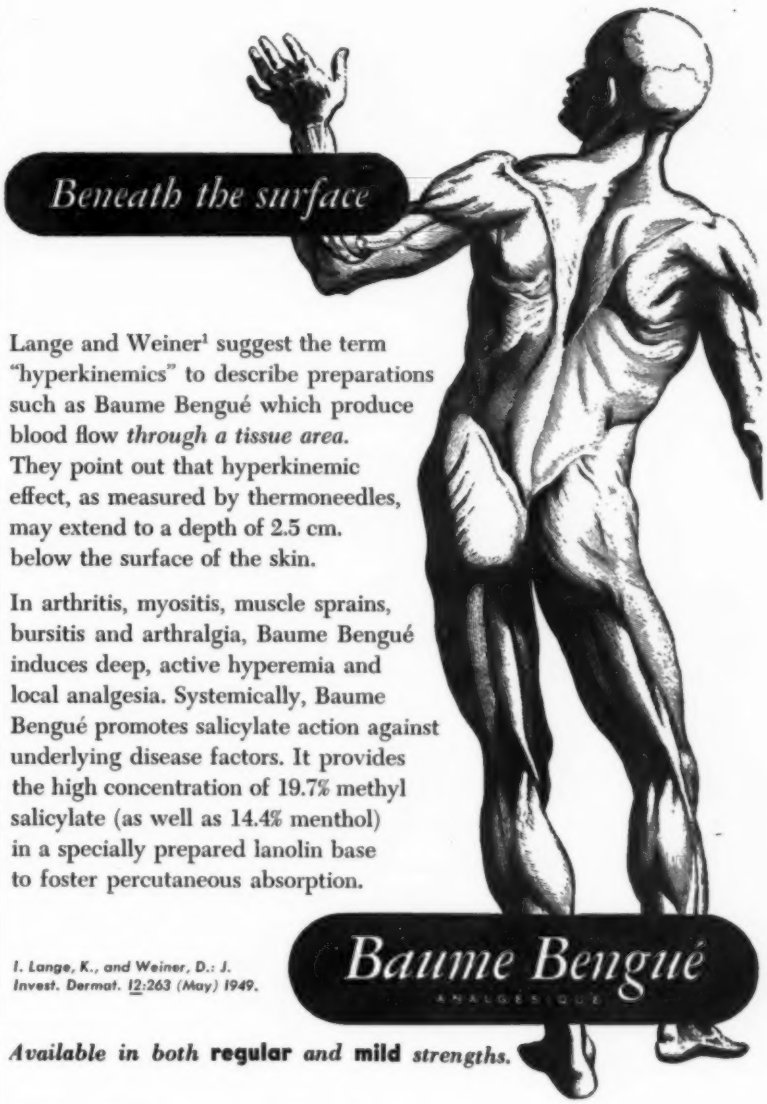
Examinations February 9 at the Hermitage Hotel, Nashville. Applications must be filed by January 15. Address M. E. Coy, D.O., secretary, Board of Examination and Registration for Osteopathic Physicians, 1226 Highland, Jackson.

WISCONSIN

Basic science examinations March 12 at Hotel Loraine, Madison. Applications must be filed by March 4. Address Prof. William H. Barber, secretary, Board of Examiners in the Basic Sciences, 621 Ransom Ave., Ripon.

WYOMING

Examinations February 7 at Cheyenne. Address Franklin D. Yoder, M.D., secretary, Board of Medical Examiners, New State Office Bldg., Cheyenne.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Lange and Weiner[1] suggest the term "hyperkinemics" to describe preparations such as Baume Bengué which produce blood flow *through a tissue area.* They point out that hyperkinemic effect, as measured by thermoneedles, may extend to a depth of 2.5 cm. below the surface of the skin.
In arthritis, myositis, muscle sprains, bursitis and arthralgia, Baume Bengué induces deep, active hyperemia and local analgesia. Systemically, Baume Bengué promotes salicylate action against underlying disease factors. It provides the high concentration of 19.7% methyl salicylate (as well as 14.4% menthol) in a specially prepared lanolin base to foster percutaneous absorption.
1. Lange, K., and Weiner, D.: J. Invest. Dermat. 12:263 (May) 1949.
Baume Bengué
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Available in both regular and mild strengths.
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REREGISTRATION OF OSTEOPATHIC LICENSES

January—Alberta. No reregistration. Pay $10.00 a year membership in the College of Physicians and Surgeons. Alberta, in January.

During January—Connecticut, $2.00. Address Frank Poglitsch, D.O., secretary, Osteopathic Examining Board, 300 Main St., New Britain.

During January—Minnesota, $2.00. Address Wallace F. Kreighbaum, D.O., secretary, Board of Osteopathic Examiners, 2748 Hennepin Ave., Minneapolis 8.

During January—Wisconsin, $3.00. Address Thomas W. Tormey, Jr., M.D., secretary, Board of Medical Examiners, State Office Bldg., 1 W. Wilson St., Madison.

January 31—British Columbia, amount of fee set at Annual Meeting of Council of College of Physicians and Surgeons of British Columbia. Address Lynn Gunn, M.D., Registrar, College of Physicians and Surgeons of British Columbia, 1807 W. 10th Ave., Vancouver 9.

Before February 1—Vermont, $3.00 for residents, $2.00 for nonresidents. Address Charles D. Beale, D.O., secretary,

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The primary concern of the dermatologist is embodied in the dictum, "Primum Non Nocere," meaning "*First do no harm.*"[1,2] A major attribute of Desitin Ointment is its non-sensitizing, non-irritant, non-toxic[4-6] quality even when applied over extensive, raw skin areas. To soothe, protect, lubricate, and accelerate healing ... without causing "therapeutic" or "overtreatment" dermatitis ... rely on

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Tubes of 1 oz., 2 oz., 4 oz., and 1 lb. jars.

May we send **samples** *and literature?*

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1. Overall, J. C.: Southern M. J. 47:789, 1954. 2. Editorial: New England J. M. 246:111, 1952.
3. Grayzel, H. G., Heimer, C. B., and Grayzel R. W.: New York St. J. M. 53:2233, 1953.
4. Heimer, C. B., Grayzel, H. G., and Kramer, B.: Archives of Pediatrics 68:382, 1951.
5. Behrman, H. T., Combes, F. C., Bobroff, A., and Leviticus, R.: Ind. Med. & Surg. 18:512, 1949.
6. Turell, R.: New York St. J. M. 50:2282, 1950.

Part II consists of examinations in surgery, including applied anatomy, surgical pathology, and surgical specialties; obstetrics and gynecology; pediatrics; neurology and psychiatry; public health, including hygiene; medical jurisprudence; osteopathic principles, therapeutics, including pharmacology and materia medica.

Part III is an oral and practical examination given under the supervision of a chief examiner who is a member of the Board and by a panel of associate examiners. Subjects covered in Part III are anatomy; physiology; pathology; osteopathic principles, therapeutics, and pharmacology; surgery; ophthalmology and otorhinolaryngology; obstetrics and gynecology; physical and clinical diagnosis; public health and communicable diseases.

Part III examinations will be given at the College of Osteopathic Physicians and Surgeons, Los Angeles, March 5-6, at the Chicago College of Osteopathy, Chicago, April 3-4, and in the Spring at Philadelphia and Kirksville, Mo.

These are oral examinations which the candidate may take after having satisfactorily completed the first 6 months of a 1-year internship in a hospital approved by the American Osteopathic Association for intern training. Part III is given annually at the above-named colleges.

Eligibility requirements are as follows: Part I, satisfactory completion of the first 2 years in an approved school of osteopathy; Part II, satisfactory completion of Part I and of the first two quarters or trimesters of the senior year in an approved osteopathic college; Part III, satisfactory completion of Part II and at least 6 months of a 1-year internship approved by the American Osteopathic Association. The internship requirement does not apply to candidates who took Part I prior to July, 1950.

Application must be filed with the secretary of the Board not less than 30 days prior to the examination dates. Address Paul van B. Allen, D.O., secretary, 1512 N. Delaware Street, Indianapolis 2, Indiana.

Board of Osteopathic Examination and Registration, Mead Bldg., Rutland.

Before March 1—Colorado, $2.00 if legal resident; $10.00 if not legal resident. Address Samuel H. Brown, M.D., executive secretary, Board of Medical Examiners, 831 Republic Bldg., Denver 2.

April 1—Montana, $2.00 for those in active practice; $1.00 for those inactive. Address Asa Willard, D.O., secretary, Board of Osteopathic Examiners, Wilma Bldg., Missoula.

April 1—Wyoming, $2.50. Address Franklin D. Yoder, M.D., secretary, Board of Medical Examiners, New State Office Bldg., Cheyenne.

EXAMINATION BY NATIONAL BOARD

The National Board of Examiners for Osteopathic Physicians and Surgeons conducts Parts I and II of its examination on the first Thursday and Friday of each May and December at the six approved colleges. Application blanks may be obtained from the secretary or the dean of the college, and the completed application blank, together with a passport photograph and check for the parts to be taken, must be in the secretary's office by the November 1 or April 1 preceding the examination.

Examinations in Part I consist of anatomy, including histology and embryology; physiology; physiological chemistry; general pathology; and bacteriology, including parasitology and immunology.

THE ADDITION OF SPECIFIC NUTRIENTS TO FOODS*

In November 1953, a joint statement of general policy in regard to the addition of specific nutrients to foods was issued by the Food and Nutrition Board of the National Research Council and the Council on Foods and Nutrition of the American Medical Association.

The Food and Nutrition Board of the division of biology and agriculture, National Research Council, was organized in 1940 for the "translation of nutritional

*This short report, prepared by the Laboratory of Biochemistry and Nutrition, National Institute of Arthritis and Metabolic Diseases, National Institute of Health, Public Health Service, was reprinted from *Public Health Reports*, March, 1954.

science to public welfare." Establishment of the board was a result of efforts of the executive branch of the Government to establish a Consumer Protection Committee as a part of the National Defense Council. To secure scientific guidance for the committee's programs, the National Research Council was asked to set up a Committee on Food and Nutrition. The committee held its first meeting in November 1940 and 1 year later it was given board status and renamed the Food and Nutrition Board.

During World War II, the board served the defense agencies in an advisory capacity, under contract. With the cessation of the war, the Milbank Memorial Fund, the Nutrition Foundation, and the Williams and Waterman Fund of the Research Corporation undertook support of its peacetime activities.

Although it has no authority in governmental or regulatory matters, the Food and Nutrition Board is frequently requested to advise various agencies on nutritional problems. Occasionally, its deliberations form the basis for regulatory promulgations, action programs for health and welfare agencies, and research studies, the results of which might have broad health implications.

The 24 members of the board are chosen for their ability to interpret "the results of food and nutrition research in terms of its broad applications and implications in national and world affairs" (*1*). They are affiliated with universities, research institutions, and industrial organizations and serve without compensation. The governmental and nongovernmental agencies that might be affected by the board's deliberations participate through liaison representatives, but have no voting power. The problems presented are considered by both standing and ad hoc committees, the chairmen of which report to the semiannual meetings. A permanent secretariat is maintained under the administration of the National Research Council for coordinating committee activities and advancing the operational activities and programs resulting from the board meetings.

Some of the committees of the Food and Nutrition Board that have public health implications are those on nutrition surveys, industrial feeding, food protection, cereals, survey of food and nutrition research, fluoridation, maternal and child feeding, definition and standards of identity for foods, dietary allowances, and milk. These committees have developed a variety of standards which have been used in public health activities. The best known of these standards are the Recommended Dietary Allowances (*2*); Tables of Food Composition (*3*); and the previously mentioned statement of general policy in regard to the addition of specific nutrients to foods, which is quoted below.

STANDARDS FOR FOOD ADDITIVES

"During the 1930's certain nutritional deficiencies were prevalent in the population of the United States, and newly developed synthetic vitamins were being used in foods with little or no scientific guidance. In 1939, and again in 1946, the Council on Foods and Nutrition of the American Medical Association adopted its policies on the proper additions of vitamins and minerals to foods. In 1941 the Food and Nutrition Board (originally the Committee on Foods and Nutrition) of the National Research Council likewise adopted a policy on the addition of specific nutrients to foods. These statements of policy have now been reconsidered jointly by the Food and Nutrition Board and the Council on Foods and Nutrition in the light of experience and of new developments. There is good evidence to indicate that the policies have been beneficial to the public and have encouraged sound nutritional practices. The policies are therefore reaffirmed in principle, and with revision of wording are embodied in the following statements:

"1. With carefully defined limitations, the principle of the addition of specific nutrients to certain staple foods is endorsed for the purpose of maintaining good nutrition as well as for correcting deficiencies in the diets of the general population or of significant segments of the population. The requirements for endorsement of the addition of a particular nutrient to a particular food include (*a*) clear indications of probable advantage from increased intake of the nutrient; (*b*) assurance that the food item concerned would be an effective vehicle of distribution for the nutrient to be added; and (*c*) evidence that such addition would not be prejudicial to the achievement of a diet good in other respects.

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*Sherber, D. A.: The Control of Bleeding, Am. J. Surg. 86:331 (Sept.) 1953.

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These requirements have been met in the specific cases indicated in paragraph 6, below.

"2. The desirability of meeting the nutritional needs of the people by the use of natural foods as far as practicable is emphasized, and to that end education in the proper choice and preparation of foods and the betterment of food production, processing, storage, and distribution so as to provide more fully the essential nutrients native thereto are to be encouraged.

"3. In order to avoid undue artificiality of food supply, foods chosen as vehicles for the distribution of additional nutrients should be, whenever practicable, those foods which have suffered loss in refining or other processing, and the nutrients added to such foods should preferably be the kinds and quantities native to the class of foods involved.

"4. The addition of other than natural levels of nutrients to foods which are suitable vehicles of distribution may be favored when properly qualified judgment indicates that the addition will be advantageous to the public health and when other methods for effecting the desired purpose appear to be less feasible.

"5. Whenever technologic and economic developments lead to extensive reduction in the consumption of a staple food, with a consequent nutritionally significant reduction in the intake of an essential nutrient or nutrients, consideration by qualified bodies should be given to the desirability of restoring such nutrient or nutrients to the dietary.

"6. The endorsement of the following is reaffirmed: The enrichment of flour, bread, degerminated corn meal, and corn grits; the nutritive improvement of whole grain corn meal and of white rice; the retention or restoration of thiamine, niacin, and iron in processed food cereals; and the addition of vitamin D to milk, of vitamin A to table fats, and of iodine to table salt."

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THE STRESS DISORDERS AND THE INDUSTRIAL PHYSICIAN*

By William P. Shepard, M.D.†

How damaging is work? What produces stress? Contending that "work per se is not necessarily harmful," an industrial physician considers these questions and assigns to his profession a major responsibility for "evaluating occupational stresses and assaying the degree of tolerance of the human material" and preventing and curing the stress disorders.

The stress disorders have been variously listed as nervousness and neurosis, arthritis, overweight, high blood pressure, gastric and duodenal ulcer, gout, coronary disease, asthma and bronchitis, and many others (*1*). They are frequently brought to our attention dramatically in the press as sudden death from "heart attack" or "stroke." Occurring in relatively young people, especially business executives, they are almost always attributed to the stress of overwork. To a considerable degree, all the stress disorders tend to be attributed to the strains of occupation (*2-4*). One wonders if this tendency has not been exaggerated and if perhaps physicians themselves are not inclined to overemphasize the physical and mental damage of work.

The relationship of work to the stress disorders is one of several problems for which the industrial physician must assume a major responsibility. He, more than any other physician, must lead the way in studying the etiology, pathology, diagnosis, therapy, and prevention of the stress disorders. It is the purpose of this brief paper, therefore, to discuss some of the foundation stones upon which a pro-

*Reprinted from *Public Health Reports*, June, 1954.

†Dr. Shepard is the vice president for health and welfare of the Metropolitan Life Insurance Company. He presented this paper at the medical conference of the 18th annual meeting of the Industrial Hygiene Foundation of America, which was held at the Mellon Institute, Pittsburgh, Pa., November 18, 1953.

gram to meet this responsibility may be built.

HOW DAMAGING IS WORK?

Carey McCord (*5*) has said that "a little bit of man" goes into every job and that every worker thereby suffers some attrition because of pardonable pride in his own workmanship. Nevertheless, there is much good to be said about work, and perhaps too much bad has been said. In the words of Emerson, "Man doth not live by bread alone, but by faith, by admiration, and by sympathy." Who is more fortunate at any age than the one who has faith in the importance of his job, admiration of his fellows for a job well done, and sympathetic consideration by his superiors and fellow workers? Personnel experts tell us that job satisfaction is essential to a good worker. How often has each of us seen the man who has been deprived of his job decline rapidly, both physically and mentally, because he finds nothing left worth living for?

It might be wise, therefore, for those of us who have an opportunity to guide the medical destiny of industry to be a little cautious in attributing all the so-called stress disorders solely to occupation. My contention here is that work per se is not necessarily harmful. Many of the so-called stress diseases have nothing to do with stress, and many of those related to stress may not be related to work. They may be the results of accident, including infection; or of the kind of nervous system with which one is endowed; or of the inexorable aging process which begins at birth; or of improper habits.

WHAT PRODUCES STRESS?

Stress comes from the Latin "strictus," the past participle of "stringere," which means to bind tight. Stress means to subject to the action of external forces, especially to overstrain. To the engineer, it means mutual force or action between contiguous surfaces or bodies caused by external force, as tension or shear, commonly expressed as pounds per inch.

Engineers deal extensively with stress in materials of many kinds, and we may learn something from them. Limits of stress are known as the breakpoint at which the material under observation disintegrates or fractures. The factor which withstands stress is called tolerance. Tolerance to increasing degrees of stress is what the engineer wishes to measure before he decides the appropriate use of a given material.

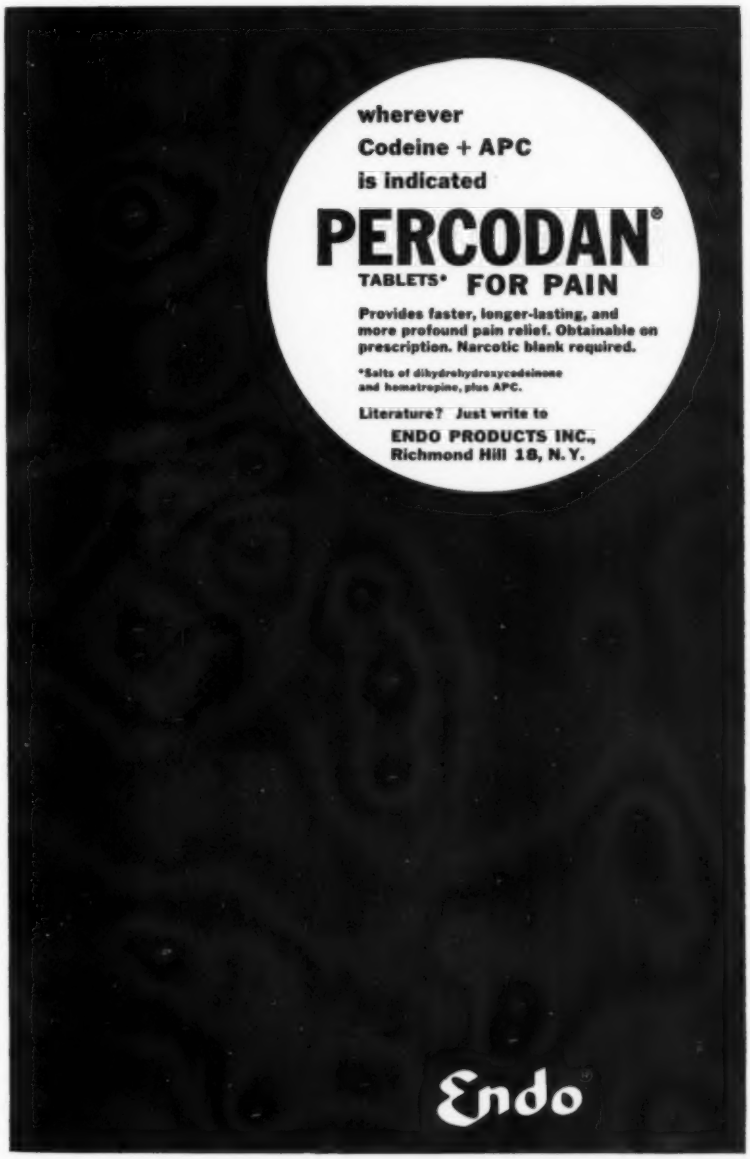
The industrial physician's responsibility to industry is somewhat similar. He must try to evaluate the stresses of occupation and to assay the degree of tolerance of the human material. His objective, like the engineer's, is to avoid imbalance so that no substantial damage is done.

It is difficult to evaluate the tolerance of the human organism because of enormous variation between individuals. It is almost equally difficult to evaluate the degree of occupational stress since "one man's meat is another man's poison." Nevertheless, the industrial physician must do his best. Determining the balance between stress and tolerance is one of his greatest contributions to industry, and one of his greatest challenges. There are no other skills available to industry which equal his in this area. Because of the importance of this task, the physician must proceed objectively and in accordance with the tenets of his scientific training, never forgetting that the art of medicine, in addition to its science, is as important in industry as in all other forms of medical practice.

THE PHYSICIAN'S ASSAY

In order to exert his best professional judgment based on years of training and experience in this question of stress versus tolerance, the physician must first have thorough knowledge of the material at hand, in this case human material. He must understand each individual's points of weakness and his points of strength. He must try to judge whether for the particular individual under observation increased responsibility is a burden or a joyous challenge.

Physical points of weakness, such as visual and hearing defects, flat feet, deformities, diminutive size, and weak muscles are fairly easy to assay and record. It is equally important, however, for the physician in industry to make some estimate of the individual's' psychological weaknesses and strengths. This obviously requires some psychiatric orientation, with a full appreciation of the many psychosomatic disorders which may



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1. De Lucia and Strosberg, Med. Times 82:1, p. 47. 1954.
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develop as a result of the many types of mental conflict. Among the commonest of these, which the industrial physician must try to understand, are the stresses and strains arising in the home and family.

Second, the physician in industry must have a thorough knowledge of the various stresses inherent in certain jobs. Whether it be in terms of the number of pounds a man can safely lift in loading a cargo, or the number of complex problems a top executive may safely take on without becoming upset and frustrated, the industrial physician is by training and experience best qualified to detect the early signs of the individual's breakpoint.

INDUSTRIAL PHYSICIAN'S TOOLS

In approaching this task of determining the balance between stress and tolerance in the human organism, the industrial physician has a well-equipped armamentarium.

Periodic Health Examinations

The periodic health examination is one of his most important tools. The technique of this examination and its importance need not be labored here. Suffice it to say that the examination must be good, that is, it must be as complete as may be necessary under the requirements of the individual case. A careful history, beginning with the question, "Is there anything you'd like to tell me?" is essential. It would seem that the skilled physician who has full knowledge of the stresses under which the individual labors might find many who could be examined in a matter of hours. He also might find some who need much more attention than that.

A second tool, closely related to the first, is health education. He who is skilled and experienced in this field has not lost sight of the teachings of one of our greatest exponents of the periodic health examination, Dr. Eugene Lyman Fiske (*6*), who showed that counseling, that is the unhurried discussion, which follows the health examination is fully as important as any other part. This is the time and place for the physician in industry to take full advantage of the time at his disposal and, more importantly, of the many health educational devices now available to impress the examinee with the significance of each of the findings on his physical examination and precisely what he should do about them.

Some industrial medical directors display considerable originality in this important component of the periodic health examination. One has a small slide projector on his desk with slides illustrating the more common lessons to be taught. Another amuses, but also impresses, his executives' monthly meetings with clever poster cartoons showing the effects of overweight, overexercise, oversmoking, and other excesses. It is encouraging to note that in 1 or 2 medical schools, at long last, students in their senior year are being taught the art and science of health education in their dealings with the patients.

If anyone thinks there is no room for improvement in this field, let him interview the average dispensary patient as he leaves the physician's office, starting the interview with the question, "What did the doctor say?" There is surprise in store for the interviewer when he learns what the patient thought the doctor said.

Science and Art

Third is the physician's clinical judgment. Although his judgment is not as accurate as the judgment exercised by the engineer after he has tested strains and tolerance in a piece of inanimate material, there is no substitute for the experience and judgment of the industrial physician who has learned all he can learn about the strengths and weaknesses of the piece of human material before him and who has studied carefully the types of stress imposed by that individual's job. No one else in industry or elsewhere has this judgment, and no physician in industry or outside can afford to fail to develop it to the utmost degree.

Finally, among the unique items in the industrial physician's armamentarium is what we must still call the art of medicine. This art is exercised to a great degree in the physician's skill in health education, and the success of the physician here can be measured by the degree to which he had been able to persuade the patient to do the things which are best for him. Under the art of medicine, rather than the science, the physician will himself be tolerant with the decisions of the individual, recognizing that some may prefer to take a calculated, or even an

unknown risk, rather than to change their habits, undergo surgery, or shed responsibility. Once the intelligent individual, especially the executive, has the facts well before him, it is his decision to make, and the physician must respect it.

CONCLUSIONS

From this brief examination of the stress disorders, we might conclude that:

1. The stress disorders are varied, often nebulous, and always important in industry, especially with executives.
2. They are not always occupational in origin; work per se is not necessarily harmful.
3. The stress disorders are the result of a maladjustment somewhere: too much stress, too little tolerance.
4. They are easier to prevent than cure.
5. Their prevention and cure is one of the industrial physician's most important responsibilities.
6. Fortunate is the worker, especially the executive, who, with or without the physician's help, can learn to pace himself for the long pull, adjusting his speed to his load, learning to lighten his load by delegating responsibility to well-chosen subordinates; and who has a high tolerance to pressure from a master above, be that master a foreman, a board of directors, or his own distraught conscience.

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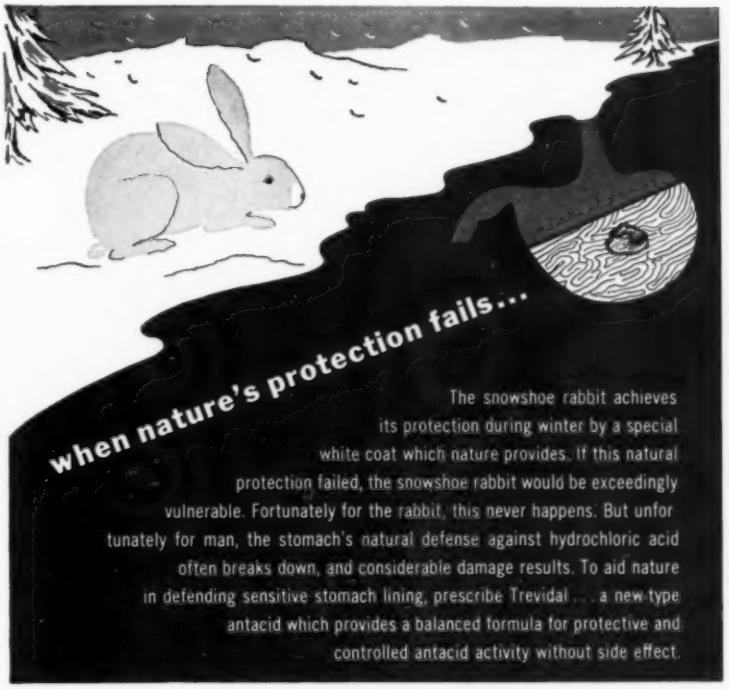
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WHY IS THE SEX DIFFERENCE IN MORTALITY INCREASING?*

By Wilson T. Sowder, M.D., M.P.H.†

Because the death rate for women is declining much faster than the rate for men, it is suggested that "something" other than a basic biological difference between the sexes accounts in part for the higher mortality among men. It is proposed that more attention be given to the study of male mortality.

In 1662 Captain John Graunt, citizen of London, in a publication entitled "Natural and Political Observations" reported that more men than women are born and that more men die before their time. He noted, however, that "physicians say that they have 2 women patients to 1 man." These observations were made by a layman nearly 300 years ago; yet, public health workers even now give these matters little attention.

Today in Florida and in the United States about 106 white boys are born for each 100 white girls. The death rates in each age group are considerably higher among males than among females, but various surveys in recent years have shown that women are ill more often. Among the nonwhite population, too, more boys than girls are born and the death rate for males is higher than the rate for females, although the differences are not nearly as great as among the white race.

The life expectancy of a white girl at birth in Florida is 73.9 years, but a white boy at birth may expect to live only 66.7 years, a difference of 7.2 years. That this difference in life expectancy exists is well-known to all public health workers, but few have given much thought to the reasons for it. Many of those who have, apparently have concluded that there are basic biological differences between the sexes which bring about a higher mortality among men. This view is supported to some extent by the fact that nature arranges for the birth of a greater number of boys than girls.

It is conceded that women may be biologically somewhat more resistant to disease and death than men. Evidence is

*Reprinted from *Public Health Reports*, September, 1954.

†Dr. Sowder, a commissioned officer of the Public Health Service since 1934, is now on leave and has been serving as State health officer of Florida since 1945.

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available, however, which suggests that men are in some way, consciously or unconsciously, adding to their native handicap in the struggle for existence and that, therefore, something can and ought to be done to reduce mortality among men.

DEATH RATES OF THE SEXES, 1920-50

In support of the premise that the higher mortality among men is due in part to something other than basic biological differences is the evidence provided by comparison of the male and female death rates over a long period of time. Death rates for both sexes, of course, have been declining for many years. Significant is the fact that the rate for females has declined much more rapidly than the rate for males.

The age-adjusted death rate in Florida for white males decreased from 13.8 per 1,000 population in 1920 to 9.1 in 1950, a decrease of 34 percent. The rate for white females in Florida declined from 12.1 per 1,000 population in 1920 to 5.6 in 1950, a decrease of 54 percent. The most startling facts, however, are these:

1. In 1920, the death rate among white males in Florida was 14 percent higher than the rate for white females.

2. In 1930, the death rate among white males in Florida was 34 percent higher than the rate for white females.

3. In 1940, the death rate among white males in Florida was 53 percent higher than the rate for white females.

4. In 1950, the death rate among white males in Florida was 62 percent higher than the rate for white females.

The same trend is found among the white population in the United States as a whole, although the differences between the male and female rates are less; and also among the nonwhite population in Florida and in the United States as a whole, although again the differences between the rates are less.

Unless one is prepared to contend that the human race has changed biologically during these 30 years, it must be agreed that something other than a basic biological difference between the sexes accounts for the more rapid decline in the death rates for women than in the rates for men. It is hoped that more interest will be shown in finding this "something" and that it will be, at least partially, preventable or correctable.

COMPARISONS BY AGE GROUP

The percentage difference between male and female rates increased in every age group during the period 1920 to 1950, although the extent of the increase has varied from group to group. The largest percentage difference in the sex death rates shifted from the group under 1 year of age in 1920 to the group 15-24 years of age in 1950. In 1920, the differences were relatively small for persons past their first birthday, the largest difference being 17 percent. However, in 1950, differences were as high as 114 percent, and for all ages from 15 to 74 years the rates were at least 50 percent higher for males than for females. A specific example of the change which has been taking place can be seen in the data for the 45-54 year age group: The rate for men was only 10 percent higher than the rate for women in 1920 and 78 percent higher in 1950.

COMPARISONS BY CAUSE OF DEATH

Although death rates for nearly every cause of death for both sexes have been declining steadily, there have been a few notable exceptions.

It is well known, of course, that deaths from lung cancer are on the increase, especially among men. In 1950, the death rates from respiratory cancer were 24.1 and 5.4 per 100,000 for white males and females, respectively, as compared to rates of 4.8 and 2.1 in 1930. Here again rates for males are higher than those for females, and the difference is apparently increasing. If excessive smoking has contributed to this increase, as has been alleged, it will be interesting to follow the future trend of this disease to learn whether the increase in smoking among women will decrease the difference in mortality.

In considering sex differences in mortality, the trends in mortality from the cardiovascular-renal diseases and ulcer of the stomach or duodenum are particularly interesting. It is generally thought that emotional tension, overwork, and worry have something to do with the development of these diseases and with their management and cure. Added together, the many kinds of cardiovascular-renal disease cause more than half of all

deaths in the United States today. Ulcer of the stomach or duodenum, although the cause of a much smaller percentage of deaths, is also a very common disease. As pointed out in a recent study by Kaufman and Woolsey (*1*), a similar disparity in trend between the sexes is found for these two causes of death.

In this study death rates of the two sexes were compared for the periods 1921-26 and 1942-47. Among women, the death rates for both causes of death declined remarkably, and the declines were greatest in the younger age groups. The cardiovascular-renal disease death rate for women aged 25-34 years in the period 1942-47 was only 54 percent (down 46 percent) of the rate in the period 1921-26, and the declines were substantial but less in the older age groups. The death rate among women for ulcer of the stomach or duodenum was only 30 percent (down 70 percent) of its former rate in the age group 25-34 years, and again the declines were substantial but less in the older age groups.

Among men, however, the trend in mortality from these causes of death was radically different. Although the rates for cardiovascular-renal diseases declined slightly among men in the age groups 25-34 years and 75-84 years, mortality in all the intervening age groups increased. The greatest increase, 35 percent, was among men aged 45-54 years. Among women in the same age group, the death rate for the period 1942-47 had declined to 73 percent (down 27 percent) of its former rate. The male death rate for this age group for 1942-47 was twice the female rate. For ulcer of the stomach or duodenum, the trend among men was about the same, except that increased mortality began at age 45 years and persisted into all the older age groups. That the trend in mortality from this cause has not changed is demonstrated by the fact that in 1950 the death rate was four times as high as the rate for women for all age groups.

In 1950, the death rates in the United States for nearly all of the 64 major causes of death were substantially higher among men than among women (*2*). Female mortality was significantly higher for only 3 of the major causes: diabetes (62 percent higher among women), cancer of the breast, and cancer of the genital organs. It is not surprising, perhaps, that the death rates from suicide and homicide were about three times as great among men as among women, that accidental deaths were more than twice as frequent, or that the death rate from syphilis was twice as high. It may be surprising to many people, however, that the tuberculosis death rate was more than twice as high among men as among women and that men died 50 percent more often from poliomyelitis and 20 percent more often from pneumonia and influenza. The cancer death rate was 5 percent higher for white males than for white females. Cancer of the buccal cavity and pharynx and of the respiratory system killed four times as many men as women.

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It is interesting to note that the two types of cancer which cause more deaths among women than men, cancer of the breast and of the genital organs, are relatively more easy to detect and to cure than most other types of cancers. The only other major cause of death which seems to affect women more than men, diabetes, is also relatively easy to detect and manage, and, even if it cannot be cured, it need not cause early death.

SPECULATIONS AND SUGGESTIONS

Additional figures could be cited, but it is believed that enough have been given to establish that the death rate for women is declining much faster than the rate for men. Figures have also been given to show that male mortality is higher for most of the major causes of death. It has been suggested that the native frailty and fragility of the male cannot be the sole cause for the higher mortality, and the hope that study and research will be made to find other causes has been expressed. At present, it is possible only to point out a few factors which may have some bearing on the problem.

The man of today certainly has some handicaps which cannot be easily cast aside. In general, he is still the main breadwinner of the family and, therefore, is inevitably exposed to the worries and pressures of modern life, as well as to its physical dangers, to a greater degree than women. However, it does seem peculiar that the trend in mortality favors

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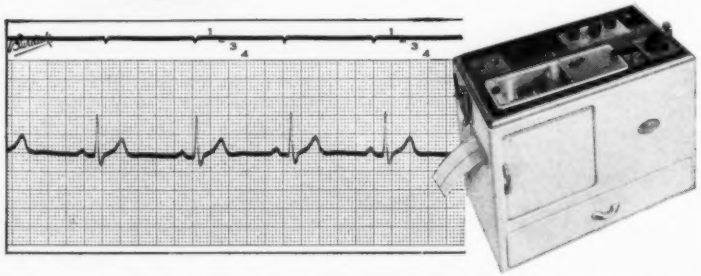

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women at a time when more and more women have become employed and in occupations once monopolized by men. It may be difficult to show, therefore, that occupations account, in any large measure, for the higher mortality among men, although an occupational relationship should be investigated. A study of the Registrar General of England and Wales (*3*) pointed out that the rise in the mortality of men in going down the socioeconomic scale is largely a product of environment, rather than of occupation. This conclusion was based on the finding that the mortality of the wives of men in the various socioeconomic classes showed the same rise in mortality in proceeding down the socioeconomic scale as did the mortality of the men.

It may well be that a difference in the reactions of men and women to modern life, including work, has more bearing than the work itself. Men are considered more dynamic than women, and nature may have intended that their energy should be dissipated largely by physical exercise. Today, physical exercise is not the necessary part of life it once was; moreover, it is assiduously avoided by some. It is possible that women escape the consequences of worry, frustration, disappointment, and tension to a greater degree than men by being more vocal about these conditions, through tears or occasionally hysterics. The reaction of men, on the other hand, may be in the form of coronary disease, hypertension, or ulcers.

Men are naturally more aggressive and venturesome than women. Their aggressiveness and lack of caution might explain their higher venereal disease rate, greater addiction to alcohol, and greater tendency to homicide and accidents. It is possible that males get around more and therefore suffer greater exposure to tuberculosis, poliomyelitis, pneumonia, and influenza. However, it is not established whether males contract infections and communicable diseases more frequently or whether they are simply less resistant to them and recover less often.

It may be that women are better and more frequent customers of modern medical science than are men. Sickness surveys have shown that women are ill more often than men (*4*). Women possibly have a greater tendency to stay away from work for mild illnesses than men, to go to bed sooner and stay longer, to go to see their physician earlier and return more often, and to follow their physician's instructions more faithfully.

Certainly, there are many more specialists in diseases of women than in diseases of men. It is also true that Federal and State governments have had special health programs for women for over a quarter of a century, but they have had none aimed specifically at improving the health of men. The health programs for women, of course, have been aimed primarily at preventing illness and death incident to the complications of childbirth, and there has been a progressive decline in deaths from such complications.

The facts raise the suspicion that men are suffering from the very ancient delusion that they are the stronger and superior sex, when, as a matter of fact, we can only be sure that their skeletal muscles are stronger. In past ages a big biceps counted a great deal in the battle for survival, but it means little now. An inventory should be taken of the physical, mental, and emotional assets and liabilities of the male, and the knowledge used to halt the trend that has been shown.

It is not suggested that less attention be paid to the health of women, for much remains to be done for them. The time has come, however, to do more about the health of men, particularly middle-aged and older men. The male population should be aroused to take advantage of all that modern medical and public health sciences have to offer. The medical and public health professions should be made more alert to the greater hazards faced by men.

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FAMILY HISTORY AND LONGEVITY*

Evidence that some of the common diseases tend to run in families is found in a recent mortality study based upon the experience of a large number of Life insurance companies during the period 1935 through 1950.† The evidence is derived from a comparison of the mortality among persons who reported a family history of cardiovascular-renal disease, cancer, diabetes, or mental disease at the time they applied for Ordinary Life insurance with the mortality for all Ordinary policyholders to whom insurance was issued at standard premium rates.

In view of the predominance of heart and other circulatory diseases in the mortality picture, particular interest attaches to the experience of the more than 15,000 insured persons in the study who had reported two or more close relatives with cardiovascular-renal disease acquired before age 60. The mortality among policyholders with such family history to whom insurance was issued at standard premium rates was about 40 percent higher than that for standard Ordinary risks as a whole. Most of the excess mortality was attributable to the high death rate from diseases of the heart and vascular system.

A review of the experience of two large companies indicated that among the insured who, in addition to having a family history of cardiovascular-renal disease, either were slightly overweight or had a slight elevation in blood pressure, the mortality was 70 percent higher than the average for standard Ordinary risks, whereas among insured lives with a family history of cardiovascular-renal disease but free of these impairments, the mortality was only 25 percent above the average. Thus, the influence of family history is increasingly apparent among persons with conditions associated with cardiovascular disease, such as overweight or hypertension.

The 1951 Impairment Study did not separately analyze the experience for heart disease according to etiological types, but such information is available from other investigations. The work of Dr. May Wilson and her associates in New York City, for example, indicates a hereditary susceptibility to rheumatic fever and rheumatic heart disease. Similarly, a recent clinical study‡ showed that the prevalence of coronary heart disease was considerably higher among the parents of a group of young patients suffering from coronary heart disease than it was among patients in a control group. Among the siblings of these cardiac patients, the excess of coronary heart disease was even higher than it was among the parents.

In the recent insurance study, among policyholders reporting two or more cases of cancer in parents or siblings under age 60, the mortality from all causes combined was about average, but the mortality from cancer, which accounted for one third of all the deaths in this group, was more than twice the average. Some studies based on clinical histories likewise indicate that susceptibility to cancer of certain sites may run in families. It has been reported that cancer affects both members of identical twins more frequently than it does both fraternal twins.

Some evidence of familial association in diabetes is found in the 1951 Impairment Study. The mortality from diabetes among policyholders with even a single diabetic (at any age) in the family was nearly twice the average for all standard Ordinary policyholders. Further evidence of the role of heredity in this disease is afforded by numerous studies of clinical records, including those based upon the extensive experience of the Joslin Clinic in Boston.

Some information on the hereditary aspects of mental disease is afforded by the experience on insured persons who reported two or more cases of mental disease in the family before age 60. This

†1951 Impairment Study, published by the Society of Actuaries, April, 1954.

‡M. M. Gertler, S. M. Garn, and P. D. White, "Young Candidates for Coronary Heart Disease," *Journal of the American Medical Association*, Oct. 13, 1951, p. 621.

*Reprinted from *Statistical Bulletin*, Metropolitan Life Insurance Company, September, 1954.

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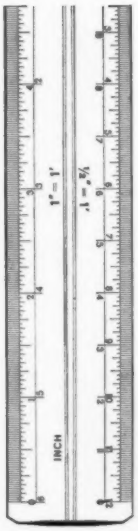

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age limitation served to eliminate most cases of mental disease or degeneration due to cerebral arteriosclerosis. The mortality from all causes combined among the insured with such family history was slightly above average. In this study, as well as in an earlier one, their mortality from suicide, a fairly reliable index of mental disorder, was several times the normal.

A number of investigations have pointed to the conclusion that mental disease it not directly inherited, although some predisposing factor may be transmitted. Children of parents with a mental disorder are more likely to develop mental disease than children of parents not so afflicted. Undoubtedly the effect of the home environment often contributes to the higher incidence of mental disease in such cases.

Inasmuch as family history influences individual susceptibility to disease, there is little surprise in the fact that it also affects longevity to some degree. Various studies based upon insurance and other records indicate that persons with a good family history of longevity live longer, on the average, than those with a poor record of parental longevity. While the effect of family history on longevity is appreciable, it is nevertheless small compared with the gains in longevity observed through the improvement in environment since the turn of the century.

HEALTH EDUCATION FOR OUTPATIENTS*

By Mary Lou Skinner, M.P.H., and Mayhew Derryberry, Ph.D.†

Workers in hospital outpatient clinics have an unusual opportunity for health education. People who come to the clinic do so because they have a health problem. It is of real concern to them. And the clinic is where they expect to get help. What takes place in the clinic can be more meaningful educationally than academic discussions or lectures about healthful practices at times when people are not actively concerned about their health.

There is an analogy between health education and medicine. Medicine is the art of applying the basic biological sciences for the benefit of the physical health of the individual. Health education is the art of applying an equally basic body of knowledge about the ways in which people acquire information, develop attitudes, and change their behavior about health.

Health education requires diagnosis of the particular situation before methods are chosen just as medicine requires diagnosis before treatment is prescribed. However, there is a tendency for some to choose an educational method that has proved successful in a particular situation for which it was designed, on the assumption that it is generally effective in all situations. This same tendency is sometimes observed in medicine. A dietitian tells this story:

One of the older physicians on the staff had ordered an extremely high fat diet for a diabetic patient. A week or so later, diet orders with a very high fat content came down to the diet kitchen for two other diabetic patients. Thinking there must be some good reason for this deviation from the hospital's usual practice, the dietitian went up to the ward to inquire. The new intern said in surprise, "Oh, are those diets unusual? Why, I just ordered what old Dr. Brown had prescribed for the last diabetic patient he had here." As it turned out, Dr. Brown had put his patient on a ketogenic diet during the hospitalization period for a special reason. In routinely following the other physician's prescription, the intern had unknowingly prescribed diets which were not appropriate for his patient's needs.

Such a procedure would, of course, be condemned by the experienced physician who thinks about the whole organism when a patient complains about a single symptom. In good education, too, the whole range of educational principles must be examined in order to select the best methods for a particular purpose.

HOW PEOPLE LEARN

It may be beneficial to take a look at some of the basic knowledge about how

*Reprinted from *Public Health Reports*, November, 1954.

†Mrs. Skinner is health education consultant in the Public Health Service, Department of Health, Education, and Welfare, Region II, New York City. Dr. Derryberry is chief, Health Education Services, Division of General Health Services, Public Health Service. Their joint paper was presented to the outpatient session of the Tri-State Hospital Assembly at Chicago, Ill., on March 4, 1954.

people learn before exploring ways of educating patients in clinics. Part of it will be familiar—some ideas have been recently documented by research, others are "educated hunches"—but application of the following five points is well worth all the emphasis that can be given.

First, all learning is motivated within the person, not by exterior force. Education in the real sense begins only with a problem of immediate interest to a person. The patient in the clinic has some problem of present concern to him, or he wouldn't be there. Thus, a condition favorable to learning already exists in the patient. Is maximum use made of this opportunity?

Beyond that immediate interest, people are truly motivated to do only those things which they think help achieve something they want or help cope with their own special personal problems. These goals may not be clear to the individual or to the person working with him. As a matter of fact, they are likely to be unrecognized by either. Nevertheless, they are the determining factors in what is learned in a given situation. Learning takes place more effectively when the experience has meaning for the learner, and he is able to see the full implications of the experience.

Second, learning is an active process. It occurs only through the person's own efforts. So long as he is passive toward a situation, he will learn little. Yet, how often are people "told" what to do, lectured about tuberculosis or cancer, handed leaflets about health subjects? How often does the patient's "Yes, Doctor," or "Yes, Miss" response to the information given him delude the clinician into thinking the patient is learning? Sometimes there has been real interchange of ideas, but at other times the patient's assent is simply to free himself from an undesirable situation or to prevent exposing his lack of understanding.

Third, a person selects what he sees, hears, or feels largely because of both his past and present interests or motivations, and this selection determines what he learns. Furthermore, what is learned and how it is learned differ from one person to another because each comes into a given situation with a unique background of experience and point of view.

For example, three people walk down the street past a poster announcing a chest X-ray schedule. The man who wants an X-ray will see the poster and go to the clinic. The man who thinks he has no need for an X-ray may not see the poster at all. The third person may see the poster all right but will avoid the clinic because of negative feelings about all clinics, because he is afraid of tuberculosis, because he has had a recent X-ray, or for other reasons.

The response to a simple poster arises out of complex feelings. Consider then the tangled skein of past experiences. These enhance or hinder his ability to utilize the educational opportunities in the clinic.

Fourth, behavior is seldom changed because a person has been told to do something different. He will change his behavior in a prescribed manner only when he understands what to do and when he sees the action as leading to the satisfaction of a felt need. He must want to learn the new action. He must also know clearly what action he is to take. Finally, he must see that the action will help him achieve a goal that is important to him. This characteristic of the learning process is particularly important in the outpatient clinic. How often information is given in medical terms that mean nothing to the patient! Besides that, the patient may not readily understand that the behavior advocated by the nurse or physician is related to the solution of his own health problem. He may then remain unconvinced that the procedure will cure his ailment.

It is important for the clinic staff to remember that the patient is not likely to carry out any suggested action to meet his health need which to him appears to be in conflict with his way of life. The fact that the advice is acceptable to the person giving it often blinds that person to the ways in which the information may conflict with some deeply held value of the patient. This failure to consider the personal element sometimes defeats the clinician's goal.

Fifth, the attitudes of the groups to which the patient belongs are a significant force. Most people tend to conform to the accepted standards and sanctions of family and friends. These may determine whether information is accepted or rejected and whether the person takes any action. It is often difficult to recog-

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nize many of these group influences because they may be unrealized by the patient himself. The factors which appear on the top layer often camouflage the real values held tenaciously underneath.

One expression of the way group pressures operate is through the cultural patterns of the people. These patterns are not readily discernible, and the assistance of educators and social scientists will be needed to discover the cultural medium in which a patient lives if it is to be used with insight in his education.

Current experiments with new research methods are providing additional perceptions about cultural reactions and their relation to learning. Although the full meaning of these studies is not quickly understood, and the facts are apt to be forgotten since they do not agree with prevailing concepts, it is desirable to look at some of the recent developments in the field because their significance has often been overlooked.

STRATIFIED ATTITUDES

Studies on class stratification in the United States show a society made up of fairly well-defined classes (*1*). These studies agree, too, that: (*a*) each class has different values in which it believes and which it preserves, and each has different attitudes toward education; (*b*) each class tends to reject people who are in another class; and (*c*) members of each class have different ways of managing their own lives.

The class system of this country is not like that of the European countries. It is distinctly our own. Most professional people in medicine and the allied fields are drawn from the middle and upper-middle classes. Most middle-class people think that what they believe is the common belief of all right-minded, intelligent people. This attitude trips up many educational efforts. It results in annoyance and leads to the comment that people are uncooperative, stupid, hostile.

Not everyone in the United States regards infant life, health, life, or death the way this middle class does. Nor will everyone learn easily to change behaviors regarding health and medical care unless these changes are behaviors valued by the group to which he belongs. People who are in one social class do not accept easily the teaching given them by a person from a higher social class. More respect must be accorded the varying resistances of the different cultures in our society.

Most of our observations of the expressions of cultural values are empirical and tinged with unconscious prejudgments. Only a few studies which get at this kind of fact have been done in the health field. One which deserves thought was done recently at the Veterans Administration Hospital (West Kingsbridge Road) in New York City (*2*). This study attempted to pin down the effect of cultural differences in patients' responses to pain.

Among the groups selected for intensive study, the Italians and Jews were described as tending to "exaggerate" their pain. Free expression of words, sounds, and gestures is expected, accepted, and approved in both Jewish and Italian cultures. A patient from an Italian culture is more apt to be concerned with the present. If his pain is eased, he will relax and forget his sufferings and manifest a happy and joyful disposition. The Jewish patient, however, is often reluctant to accept the analgesic drug. He explains this in terms of concern about the effects of the drug on his health. He is apprehensive about the habit-forming aspects. After being relieved from pain, many Jewish patients continued to display depressed and worried behavior.

The conclusions of this phase of the study were two:

Similar reactions to pain manifested by members of different ethnocultural groups do not necessarily reflect similar attitudes to pain.

Reactive patterns similar in terms of their manifestations may have different functions and serve different purposes in various cultures. From this, there would seem to be practical implications for education. First, there is not a public of patients, but many groups within the total patient clientele. Also, there is no quick way to bring about changes in behavior within these different groups.

Many of the symptoms which bring people to clinics are life crises—social and emotional as well as physical. A mother concerned about a new baby, a breadwinner recovering from a heart attack, a family adjusting to the diagnosis of cancer in a member—these are all real

life situations. At such times, barriers to learning are lowered. However, life crises produce many anxieties, and the patient may raise barriers to learning if the approach appears to be too great a threat to his goals of personal security.

The fact of having to admit illness, for the most part, threatens the familiar image of the patient's own successful ways of meeting life. Illness calls into play unaccustomed responses. The patient is more apt to worry about the unfamiliar. He has to ask for help, and these feelings about seeking help can be charged with guilt. Staff members may share emotionally charged feelings about seeking help or dealing with illness. Their inner judgments affect the inflection of voice and physical gestures. These become cues to which the patient reacts favorably or unfavorably, raising or lowering his defenses accordingly. In fact, what the patient perceives is just as potent a force in his education as the planned instruction during a lecture or individual conference.

For an educational program to make the most of its opportunities, the clinic staff must seek more knowledge about, and be willing to accept the worth of, patients' values and knowledge. There are two kinds of educational opportunities in a clinic that may be considered against the background of educational principles—the ones you plan for and the ones you don't, or opportunities for indirect and direct education programs.

INDIRECT EDUCATION PROGRAMS

A thoughtful objective look at what goes on in the clinic will indicate some of the instances and situations in which unplanned education occurs. What does the patient see? What is he made to feel?

What the patient learns depends on the clinic atmosphere—its climate. An inquiry into its physical makeup is a good starting point. For example: To what extent has the staff impersonalized the hospital-clinic routine? Must the patient sit in brown and dingy corridors? Does someone explain to him what he is to expect and why; and, is he prepared to spend the time required? Is the unit aware of what the wait means to the patient; and, is the patient uncertain while he waits?

Uncertainty creates fear, and fear is apt to produce anger which, though it may be expressed in many ways, often appears as resentment or apathy. When there is vagueness about the details of therapy, it is perfectly normal for the patient to imagine the worst. He will cooperate more readily when he knows about routine matters.

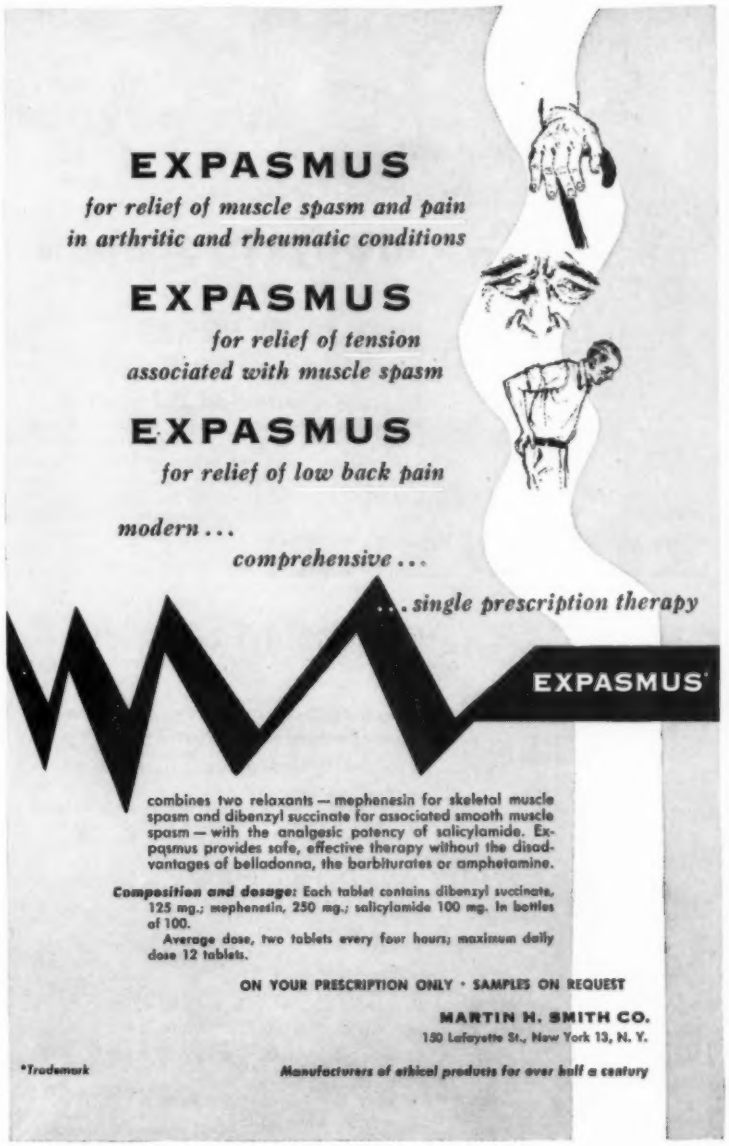
A public health nurse tells about the time she was suddenly taken ill while on her vacation. The hospital physician she called urged her to come to the outpatient clinic. There she had to wait a long time, feeling more and more miserable. Finally, she was vaguely aware of a stiffy starched nurse advancing toward her and carrying a hypodermic needle. The strange nurse told her to get up on the table in the cubicle "over there." It was only because of her hospital training that the public health nurse questioned this command. As it turned out, the physician had had an emergency call. He had been sure from the patient's description of her symptoms that penicillin was indicated and had left an order for it to be given.

In this instance, it was particularly fortunate the patient spoke up—she knew she was sensitive to penicillin. But what might some other patient, not a nurse, have learned about medical practice from such vague experience, so unrelated to his own understanding of cause and effect and expectations of medical service? And what kinds of feelings would such patient transfer to the next situation? Simple thoughtfulness will reassure a patient, make him less demanding and more ready to hear the advice of the staff. It will make a positive health education experience the more likely.

The Physician's Role

The medical director can set the stage in which real education occurs, or he can defeat the opportunity for education. Among other studies bearing this out, the Denver study of tuberculosis hospitals (*3*) shows that the organization of a hospital often does not encourage sufficiently free exchange of information between various professional services. When the barriers are down, so that there is a pooling of information concerning patients, all benefit. It is the medical director who creates the climate in which this can happen.

The position which the physician holds in the patient's regard is the rock upon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which treatment succeeds or fails. If the patient is given the feeling that the physician is interested in him personally, he is able to utilize other aspects of the medical care much more adequately. This was seen in Boston in the diabetes education program sponsored by the Diabetes Field Research and Training Unit of the Public Health Service. How the physician referred the patient to the group classes made a difference in the patient's willingness to come to the classes and to accept the information given by the nurse and nutritionist throughout the 8 weeks' session.

The staff's perception of how it feels to be a patient will be increased by each member's participation in situations which parallel those experienced by the patient. There is a growing trend to plan situations for the staff in terms of the conditions in which patients find themselves so that they can better understand how it feels to be a patient. Many a hospital routine has been changed by wise physicians or nurses, after they themselves have been real life patients. It is not possible to, nor would one wish that every person could, have the experience of being a patient. Accumulated knowledge, however, attests the contribution to patient care and education of contrived experiences which develop insight.

At Boston Psychopathic Hospital, staff members are offered an opportunity to take a drug which can create in well people for approximately 24 hours the feelings which a schizophrenic patient experiences. This sensitizing experience is not possible or necessary for all of the hospital staff. But it illustrates the idea of devices by which one may become more sensitive to a patient's feelings. Staff members have also tried role-playing of "how it feels to be a patient" and are enthusiastic about the usefulness of this technique. There was a health department, too, which changed its entire procedure for handling telephone reports of communicable disease after the role-playing of "what happened on a call about a suspected diphtheria case." Another technique might be to have young medical students get the "feel" of clinic processes by going through a clinic identified only as a patient.

(To be concluded in the February JOURNAL.)

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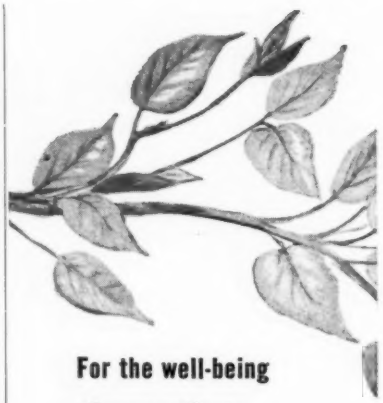

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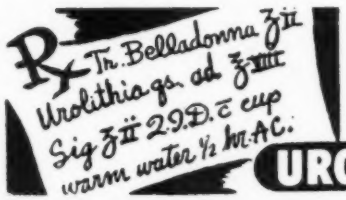

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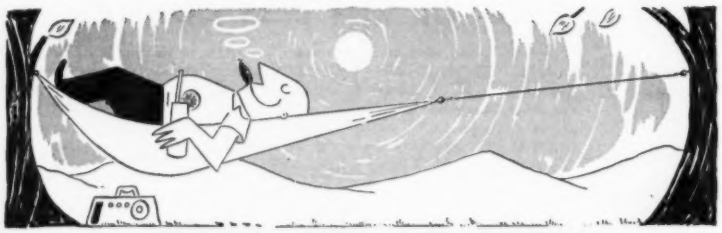

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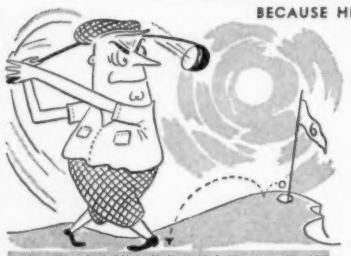

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Schwartz, John P., Jr., DMS '54; 2822 University Ave., Apt. 2, Des Moines 11, Iowa
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Shapiro, Daniel M., from Brooklyn, N. Y., to 432 Palisades Ave., Cliffside Park, N. J.
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Simpson, Sarah W., from Newport, Maine, to Hampton Road, Carmel, Maine
Siudara, Leonard J., from 2750 W. Twelve Mile Road, to 3083 Coolidge Highway, Berkley, Mich.
Smith, John Christopher, PCO '54; 1227 N. 65th Ave., Philadelphia 26, Pa.
Speak, Kenneth E., KCOS '54; Dallas Osteopathic Hospital, 5003 Ross Ave., Dallas 6, Texas
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Stucker, John, CCO '54; Doctors Hospital, 1087 Dennison Ave., Columbus 1, Ohio
Surridge, Edgar Donald, Jr., KCOS '54; Mount Clemens General Hospital, Macomb at North, Mount Clemens, Mich.
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Taylor, Raymond G., Jr., from Cleveland, Ohio, to 25301 Wolf, Bay Village, Ohio
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Toler, Robert J., from Tulsa, Okla., to 401 Mammoth Bldg., Shawnee, Okla.
Testa, Ben, KCOS '54; Mahoning Valley Green Cross Hospital, Warren, Ohio
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Vincent, Elmo H., COPS '53; 3210 W. Vernon Ave., Los Angeles 8, Calif.
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Wilcher, Charles F., Jr., from Bay Village, Ohio, to 75 N. Dixie Drive, Vandalia, Ohio
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Wilson, Everett E., from 761 Reibold Bldg., to 371 Kenilworth Ave., Dayton 5, Ohio
Wilson, Rich I., KC '54; Doctors Hospital, 1087 Dennison Ave., Columbus, Ohio
Wohlstadter, Jack S., KCOS '54; Los Angeles County Osteopathic Hospital, 1100 N. Mission Road, Los Angeles 33, Calif.
Wong, Ronald A., KCOS '54; Madison Street Hospital, 1620 18th Ave., Seattle 22, Wash.
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Youngs, Leonard S., from Del Paso Heights, Calif., to 5903 Watt Ave., North Highlands, Calif.
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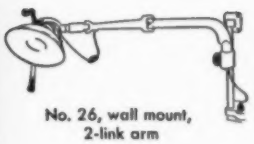

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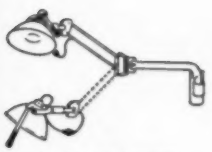

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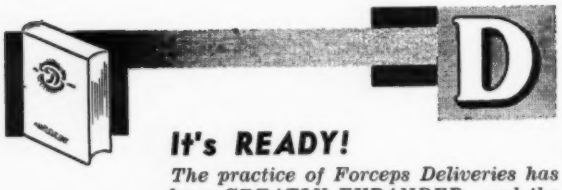

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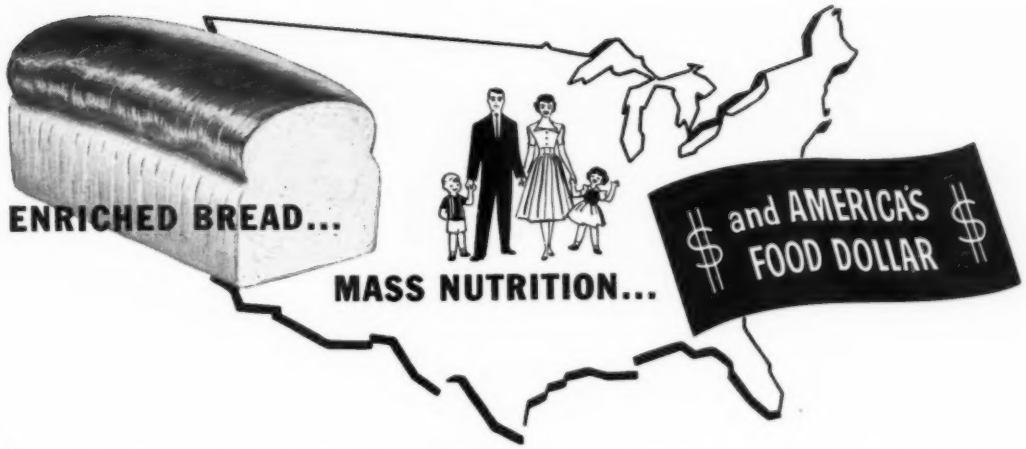

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1. Council on Foods and Nutrition, American Medical Association: A Statement of General Policy Concerning the Addition of Specific Nutrients to Foods, J.A.M.A. *154*:145 (Jan. 9) 1954.

2. Sebrell, W.H.: Trends and Needs in Nutrition, J.A.M.A. *152*:42 (May 2) 1953.

3. Bureau of Labor Statistics, United States Department of Labor, Jan., 1954.

4. Shank, R.E.: Revisions of the Recommended Dietary Allowances, J. Am. Dietet. A. *30*:105 (Feb.) 1954.

5. Sherman, H.C.: Chemistry of Food and Nutrition, ed. 8, New York, The Macmillan Co., 1952, pp. 212, 599.

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1. Hild, A. M.: Schweiz. med. Wchnschr. 71:557, 1941.
2. New and Nonofficial Remedies, J. B. Lippincott Co., Philadelphia, 1953, p. 200.

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